WebConnect Pro 6.2

User and Reference Guide

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Document History

Release Date	Change Description
July 1999	OC://WebConnect Manager Server Version 3.0 software release.
October 1999	OC://WebConnect Manager Server Version 3.1 software release.
January 2000	Added new company logo and License Manager information for OC://WebConnect SNA Access Server.
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April 2002	OC://WebConnect Pro 6.0
July 2002	OC://WebConnect Pro 6.1
February 2003	OC://WebConnect Pro 6.2 and Network License Manager

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Chapter 1:

OC://WebConnect Pro User and Reference Guide

Choosing a Client (Applet vs. HTML)

A client applet is an application program written in Java and executed within a Java-enabled browser interface. Because most of the application user interface is provided by the browser, an applet is fairly small in size and cross platform compatible and highly secure. The persistent applet TCP/IP connection offers the full range of mainframe updates, such as unsolicited data writing. The HTML client is a program written in Java Script and executed within a Java Script capable browser interface. The underlying HTML protocol provides a non-persistent access method which is more suited to request/response oriented applications.

The decision for which OC://WebConnect Pro client to use depends on the network environment, the browser used, and the features that are needed.

Browser Environment and Java Support

When you are configuring OC://WebConnect Pro clients as Java applets, the browser version used in selecting an applet package is important. Different browsers and browser versions support different Java features. A Java virtual machine (JVM) is included with all Java-enabled browsers. With Internet Explorer XP, Internet Explorer 6, and Netscape 6.x, Java is SUN JRE. The version of the JVM dictates which Java features are supported. The level of Java support is sometimes referred to as the level of JDK (Java Development Kit)

support. For example, browsers that support only JDK 1.0 features support direct printing and copy/paste features, but they require a coprocess to accomplish the tasks.

Network Environment

The network environment in which OC://WebConnect Pro is accessed and operates affects the decision to choose one applet over another, as well as whether to use OC://WebConnect Pro security features.

OC://WebConnect Pro applets are downloaded to the browser platform the first time the applet is started during a browser session. When you exit the browser, the applet no longer resides on the browser platform. This allows the administrator to maintain software and software configurations on the server while the client platform is updated. The amount of time needed to download a client emulation applet will depend on the modem connection.

OC://WebConnect Pro security features can be a necessity, depending on the sensitivity of data accessed and the security of the network used. Security features require encryption key generation and data encryption and decryption. The security feature decision is based on speed versus security. If an end user is using the corporate ***intranet*** and not accessing sensitive data, RSA or SSL might not be required. If an end user is using the ***Internet*** and accessing sensitive corporate data, security will be a high priority.

Browser Support

WebConnect Pro will operate on the following browsers:

- Internet Explorer 4.0 or later
- Netscape 4.08 or later

File Access Authority

Some WebConnect Pro features require additional security measures because the applet must access local system resources.

Security is provided by certificates that are included with the applets and verified by the browser. When the browser attempts to execute the applet, it encounters a certificate delivered with the applet that details the developer of the applet and the local file system access required. The browser then displays a window prompting the user to choose whether to grant the local file system access. If the user chooses to trust the applet by granting the access, the applet begins and all functionality becomes available for use. The user can grant the privileges on a temporary or permanent basis. If privileges are granted temporarily, future applet sessions will require the user to grant privileges again. If privileges are granted permanently, subsequent downloads and use of the applet will automatically grant privileges. The certificate and privileges can be removed from the browser under the Security or Certificates section of the browser.

The following OC://WebConnect Pro features require access to the local resources:

- The ability to write to the disk and store user configuration files for key maps, color maps, etc.
- The ability to use the local print spooler for "print screens" and 3287 print.
- The ability to access the local clipboard for copy and paste functionality.
- The ability to access the local file system to retrieve and store files for file transfer operations.

Chapter 2:

Using OC://WebConnect Pro

User Start Sessions

From the *OC://WebConnect Pro Start Sessions* window you can access all pre-configured sessions, user-configurable preferences, setting, and other components described below, only if they are implemented by your System Administrator.

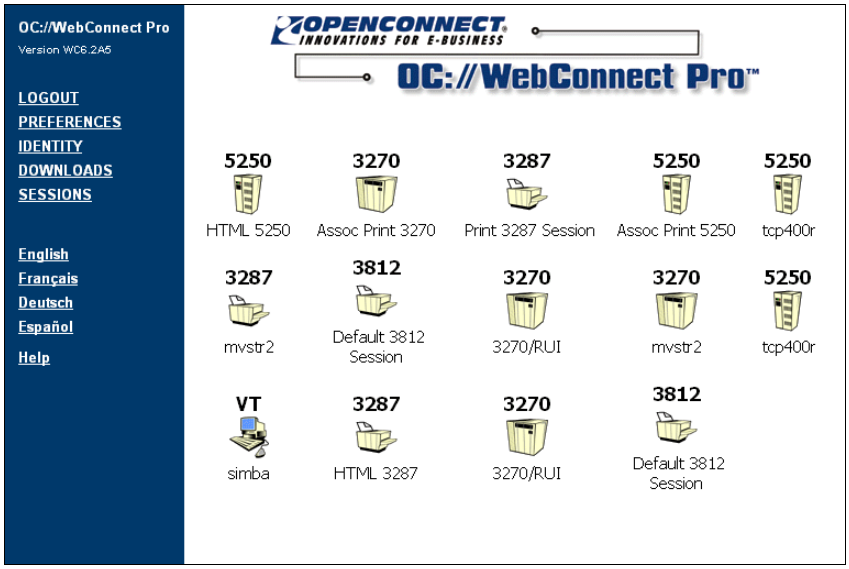

Figure 1: **User Start Session**

- Select (click) a session type from the User Start Session window to initialize a session.
  - The emulation session will open in a separate window.
  - The available Sessions Toolbar menu options must be enabled by your administrator. See, *"Emulator Screen Toolbar," page 32*.

For more information about *WebConnect* user features, see the following topics.

> *Note:* WebConnect Pro will automatically update cached applets. For HTML client sessions, see, *"HTML Client Emulation," page 73*.

Preferences

User preferences will display as either a list or icon view (as in *Figure 11, page 28*) according to the settings defined by your system administrator. If the following features do not correspond exactly with your individual *WebConnect* interface, they have not been defined by your systems administrator (if, for example, *Storing User Files*, *Single Sign-On*, or *Downloads* do not display on your menu selection).

View

Select **Preferences** from the **Start Sessions** menu (*Figure 1)* to set one of the following view options:

- **Icon View** for sessions to display session type and session name on the *Start Sessions* window with large icons.
- **List View** for sessions to display session type and session name on the *Start Sessions* window in a list format with small icons.

Identity

If your administrator has enabled this option, **Identity** will display in the menu list (*Figure 1, page 15*). You can select it and change your *OC://WebConnect Pro* password. If **Identity** does not display on your menu, only your administrator has the authority to change your password.

Display Language

To change the display language, click the desired language from the main User Start Session menu, *Figure 1 (English, French, Dutch, Spanish)*. As a result, the display language will automatically change to the selected language.

Downloads

Select Downloads from the menu and choose one of the following options to download additional components for *OC://WebConnect Pro*.

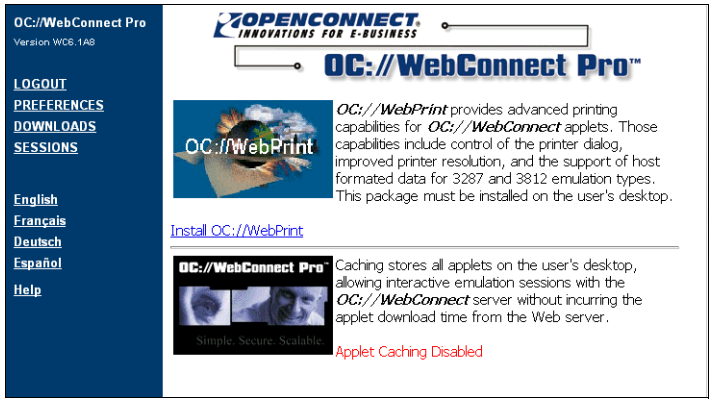

Figure 2: **User Downloads**

- Install *OC://WebPrint*. Provides advanced printing capabilities for *OC://WebConnect* applets.
- Downloads and Cache Applets. If your administrator has enabled *Applet Caching*, you can download it from this window.

Downloads with JRE

When you select "**Downloads**" from the menu and JRE is enabled, the following figure will display. For more information, see *"Browser Environment and Java Support," page 11*.

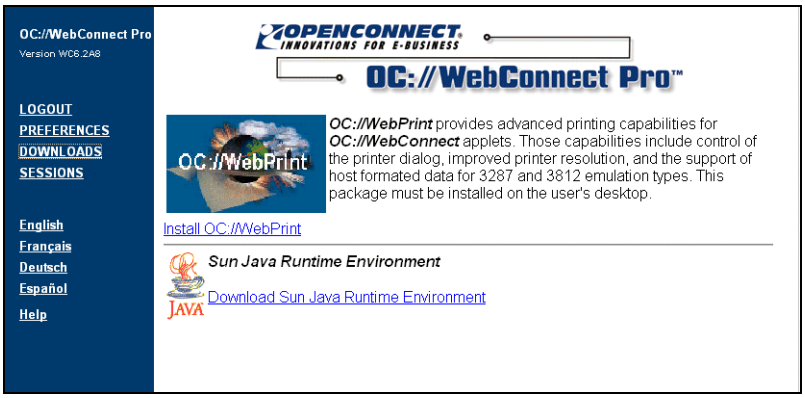

Figure 3: **User Downloads with JRE**

- Install *OC://WebPrint.* Provides advanced printing capabilities for *OC://WebConnect* applets.
- Download Sun Java Runtime Environment. If your administrator has enabled *Applet Caching*, you can download it from this window.

Install OC://WebPrint

See the following steps to install *OC://WebPrint*.

1. On the Start Sessions window (*Figure 1, page 15*), click **Downloads** from the menu.
2. Click **Install OC://WebPrint** *(Figure 2*). The *Install OC://WebPrint* for *Java* window will display *OCWebPrint.exe,* which is a zipped, self-extracting, executable file.
3. Click **OK**.
4. You will be prompted to choose the download path on your system, and *OCWebPrint.exe* will be saved to the path selected.

5. Execute *OCWebPrint.exe* from the saved location and follow the prompts to install *OC://WebPrint*.

6. You must close and restart your Web browser to invoke the installation.

Uninstall

1. To uninstall *OC://WebPrint* see the windows control panel.

2. Select **Start> Settings> Control Panel> Add/Remove programs** and follow the prompts to uninstall *OC://WebPrint*.

Printing with OC://WebPrint

- *OC://WebPrint* allows full control over font size and style and will automatically size a printed document based on display orientation.
- **OpenConnect's** system fonts have been enhanced with custom font technology from Bitstream Inc.™
- *OC://WebPrint* must be installed locally on the client system (see *"Downloads," page 18*).

Table 2-1: Printing Requirements

Operating System Requirements	Java Environment Requirements	Installation Requirements
Windows 2000 Windows NT	Internet Explorer 4.0+ Netscape 4.0.8+	Local installation required

- Choose a print method from the following options:

Table 2-2: Print Methods

Method	Definition
JDK 1.1 Print solution	Uses the built-in *Java* solution. No additional installation is required.
JavaScript print option	Will allow users to print to a browser window. The browser print facilities are then invoked to send the output to the printer. However, *JavaScript* printing does not support formatting controls, such as font size or character spacing view.
Print to File	Allows you to print to a file on the local machine. When you select print, a dialog box will display the file name to which you are printing:
	Browse: to select another file, **Append:** to append the print job to the file selected, **Overwrite:** to print only the current job to the file (erasing the current contents of the file).
The print file data is ***text only*** with no attributes. Character encoding will be converted to the platform default.	

Print to File

If user support is enabled, you can select the **Print to file** print type in the session configuration user preferences instead of *OC://WebPrint* or *JDK1.1 Print*. When you select a print job, a dialog will display the file name with the following options:

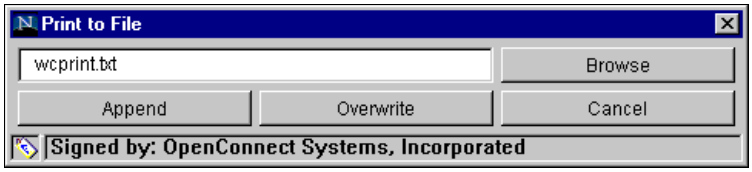

Figure 4: **Print to File Dialog**

- **Browse** to select another file
- **Append** to append the current print job to a selected file
- **Overwrite** prints only the current job to the file (erasing the contents of the previous file)
- **Cancel** to abort the print job

The data in the file is "text only" with no attributes. Character encodings will be converted to the platform default (see *Figure 10, page 27*).

Printing a Screen

You can print a single session window after you select a print screen option, see the following steps:

1. From the open session window, select **File> Print Screen** from the menu. The printer dialog window for the system will display. (Or, if the "*Print to File*" option has been configured it will open instead.)

2. Follow the system printing procedures.

3287 Print Session

Printing from any browser to a specific 3287 logical unit (LU) and gateway:

1. Select **3287 Print Session** from the *Start User Sessions* window. A 3287 printer session window will display.

2. Be sure the correct gateway and LU displays in the printer session window.

3. Send a mainframe print job to the selected LU. The 3287 printer session window will display that the session is printing.

> *Note:* To check the LU and gateway you are printing to, select *About Server* from the *Help* menu on the printer session window that displays when you start a *3287* print session. A status window will open identifying printer information, such as the number of jobs to print.
> To run print jobs unattended, disable the *Show Printer Dialog* from the session settings menu (this is not valid for *JDK* printing).

3287 Print to HTML Client

Unlike the applet implementation which sends print jobs directly to the printer, HTML print sessions are stored in a temporary server "spool" directory. You can then view the print sessions through a browser window and print them with the browser's print capability. The HTML 3287 print feature is available as a standalone printer or associated printer.

HTML 3270/3287 Associated Printer Session

1. From the User Start session, select a **3270 HTML Client** with the **3287** associated print process enabled.

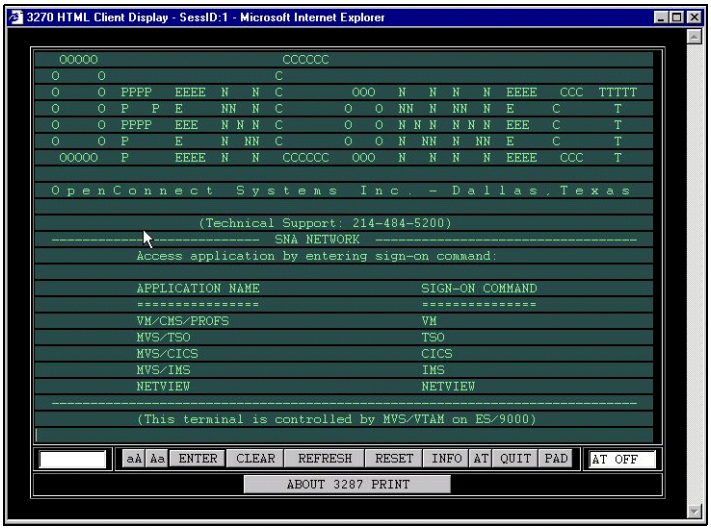

Figure 5: **3287 Associated Print**

2. The *About 3287 Print* button indicates that the printer session has started successfully. For a list of helpful client server information, click *About 3287 Print* to access the following window.

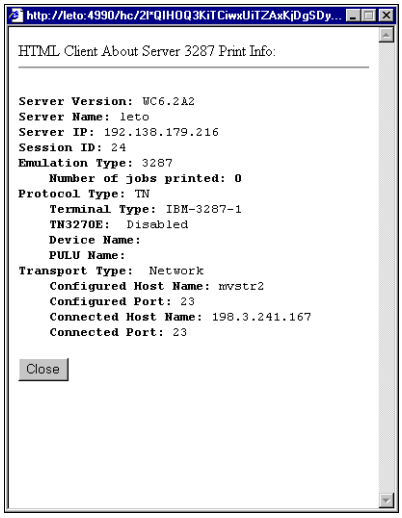

Figure 6: **About Server 3287 Print**

3. Click **Close** to return to the client session window.

4. After you have submitted jobs to the associated printer and the emulation panel has been "*refreshed*," a second **3287 Print Jobs** button will display to indicate that print jobs are complete.

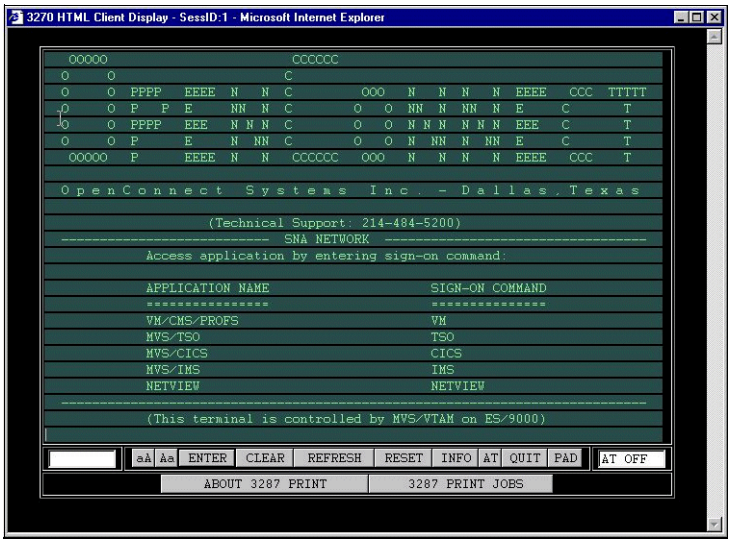

Figure 7: **3287 Associated Print Jobs**

5. Click **3287 Print Jobs** to view a print jobs list.

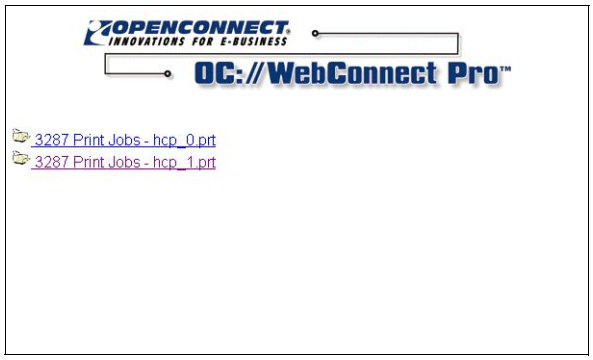

Figure 8: **3287 Print Jobs**

- A list of completed print jobs for each session will display in the browser window. The print job names will be the same, except for different print job number extensions.

6. Select (click) a print job name and the file content will display in the browser window.

7. You can use the browser printer capabilities to print the file.
   - Print jobs associated with the current session will be deleted when the session is terminated.

3812 Print Session

You can use a 3812 print session to print an AS/400 based print job on the local or network printer. From the browser, select one of the 3812 print sessions that has been configured.

To start a 3812 print session:

1. Select the desired 3812 Print Session from the *Start Sessions* window.
   - The 3812 print session window will display.

2. If the connection fails, attempt to resolve the problem indicated by the error message. If the problem persists, try a different 3812 print session.

3. Send an AS/400 print job to the print device connected to the 3812 print session. You will find the print device name (and other important information about the session) on the *About Server* dialog located in the 3812 print session *Help* menu.

Date/Time Stamp Operation

The date/time and *user@host* will print in the bottom margin of all pages generated by *Print Screen*. The user ID and PC host name will be at the left margin in the format *user@host* with the date/time printed at the right margin. US systems result in a date displaying as dd-Mmm-yy hh:mm:ss AM/PM format, 27-Sep-02 3:35.29 PM.

gtoye@ocs5555.oc.com	27-Sep-02 3:35.29 PM

Print to File Date/Time

This method does not render the page and then print it. Instead, each string is written to the file as it is received by the Print to File class.

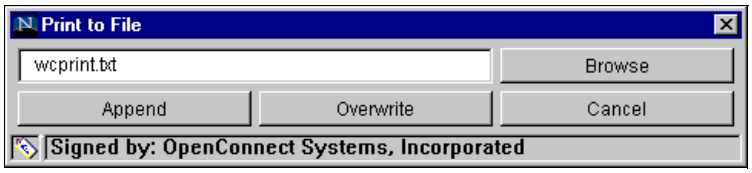

Figure 9: **Print to File Dialog**

Print date/time stamp, user ID, and PC host name will print two text lines at the top of the screen, as in the following example:

gtoye@ocs1355.oc.com
27-Sep-02 3:35:29 PM

Time/Date Stamp

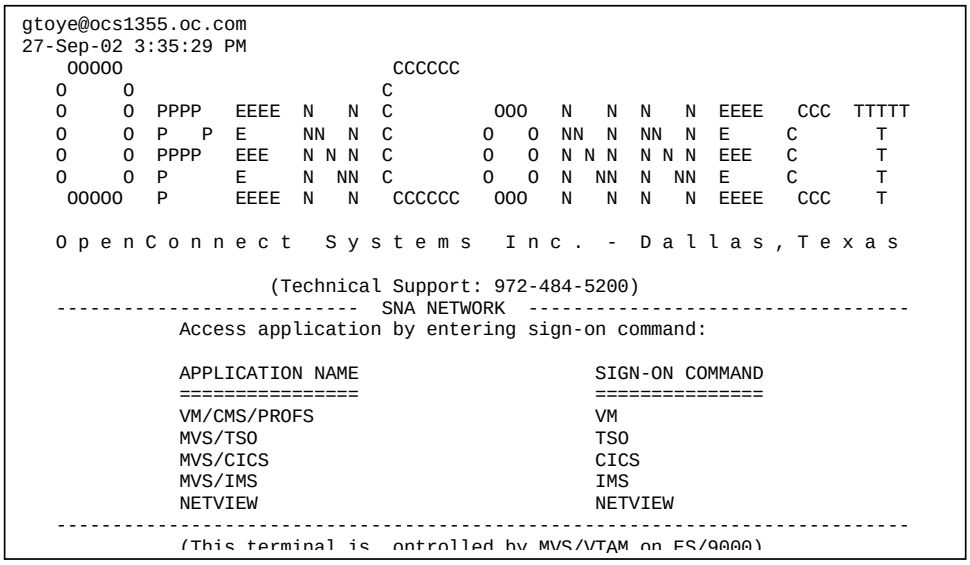

Figure 10: **Print to File Time/Date Stamp**

Tracing a Session

When technical difficulties occur with user sessions, a Help Desk Representative may instruct you to do a trace. If this situation occurs, these trace files are extremely helpful in diagnostic troubleshooting.

1. Select **Preferences** from the **User Start Sessions** menu (*Figure 1, page 15)*.

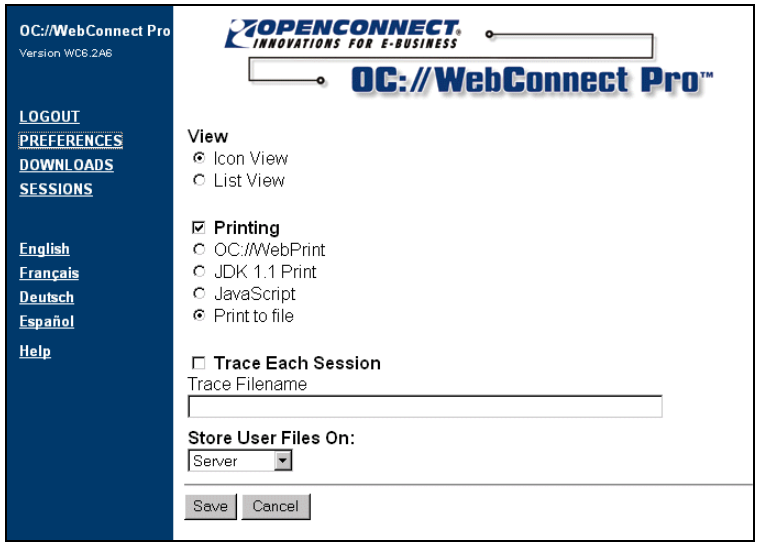

Figure 11: **Trace Sessions**

2. Check the **Trace Each Session** check-box before opening any sessions. By checking this box, you will create a trace for every session you start.

   - If your Help Desk Representative provides a filename, you can type it in the Trace Filename box. However, you should not enter a filename unless you are specifically instructed to do so.

> *Note:* Users should reset (deselect) the "Trace Each Session" feature on the Preferences window after tracing a file so that traces will not continue to collect in the traces directory.

Storing User Files

- **Desktop**: if your administrator enables this option your user files can be stored on the local machine (desktop).
- **Server**: store user files on the *OC://WebConnect Server System*.
- **No user files**: you can also choose not to store files, such as Key Maps, or Hotspots, etc.

Single Sign-On

This option will only display in your menu options if your administrator has enabled it. However, you should only disable it if you are instructed to do so by your administrator or Help Desk Representative. (Refer to the *WebConnect Pro Configuration and Administration Guide* for SSO information.)

Cache Applets

If your systems administrator has enabled autocaching, the *Downloads* window (*Figure 2*) will include the option to download and cache *OC://WebConnect Pro* applets.

> *Note:* The Download and Cache Applets link appears only if caching is enabled. In the example *Figure 2*, applet caching is disabled. Contact your administrator if the link is not visible.

See the following for additional information:

- *"Upgrading Applet Versions," page 30*.
- *"Uninstalling Cached Applets," page 31*.

Installing Cached Applets

1. Click **Downloads** and **Cache Applets** on the *Downloads* window (*Figure 2)*. The *Download and Cache Applets* for *"browserName"* window will display with one of the following messages:
   - "Product not installed"
   - "WebConnect Pro applets are not cached on the local system"
   - "Version on server is same as installed version"
   - "Latest version of WebConnect Pro applets are cached on the local system"
   - "Version on server is newer than installed version"
   - "Applets on the local system are not current"

2. Click **OK** to download and install the applets. When the applets are successfully installed (after you grant access to your system), the message, "*Install Successfully Completed*," displays.

3. Click **OK** to close the message window.

4. You must shut down and restart the browser for the changes to take effect.

Upgrading Applet Versions

When *OC://WebConnect Pro* products are upgraded, the applets cached on your local workstation are not automatically updated.

See the following steps to upgrade your applet version:

1. Click **Download and Cache Applets** from the menu (*Figure 2*).

> *Note:* The *Download and Cache Applets* link appears only if caching is enabled. Contact your administrator if the link is not visible.

The **Download and Cache Applets** for *"browserName"* page displays with one of the following messages:

- "Version on server is same as installed version." If this message appears, the applets installed are up to date.
- "Version on server is newer than installed version." If this message appears, the applets need to be updated.

2. If the message indicates your applets are older than the current version, click **OK** to download and install the new version. When the applets are successfully installed (after you grant access to your system), the message, "Install Successfully Completed," displays.

3. Click **OK** to close the message window.

4. You must shut down and restart the browser to use the cached applets.

Uninstalling Cached Applets

1. Click **Download and Cache Applets** on the Downloads page (*Figure 2*).
   - The *Download and Cache Applets* for *"browserName"* page displays.
2. Click **Uninstall** to uninstall the applets.
   - When the applets are successfully uninstalled (after you grant access to your system), the message, "Product has been uninstalled," displays.
3. Click **OK** to close the message window.
4. You must shut down and restart the browser for the changes to take effect.

Applet Autocaching

OC://WebConnect Pro will automatically notify you when the cached applet version on the server is newer than the cached version. You can choose to download the new version to your machine.

1. If you are currently using cached applets, this facility simplifies the upgrade process.
   - If caching is turned **OFF** in the configuration, you will not see this feature.
2. If caching is turned **ON** in the configuration for a first time user, the following message will display, "Do you want to download the applet?"
   - **YES**—to download the applet.
   - **NO—**you can also elect to disregard future messages.

3. If you have been using cached applets and you install a new version of *OC://WebConnect Pro*, a pop-up window displays and notifies you with the following message:

   "The Version on the Server is newer than your existing cached applet version."

   - You have the option to download the new applet.

Client Emulation Features

3270, 5250, and VT Client Emulation Features

The *3270*, *5250*, and *VT* client emulation applets have similar user interfaces and share many interface features. The client window has a *Menu Bar*, an *Emulator Screen Toolbar*, an *Emulation Space*, and an optional *Clickpad*.

Menu Bar

The *Menu Bar* allows you to perform the tasks outlined in *Table 2-4, page 35*.

> *Note:* For Toolbar information, see *Figure 13, page 33*.

Emulator Screen Toolbar

- The available Sessions Toolbar menu options must be enabled by your administrator. You can toggle it ON/OFF under the *Setting* drop-down menu on the session applet.

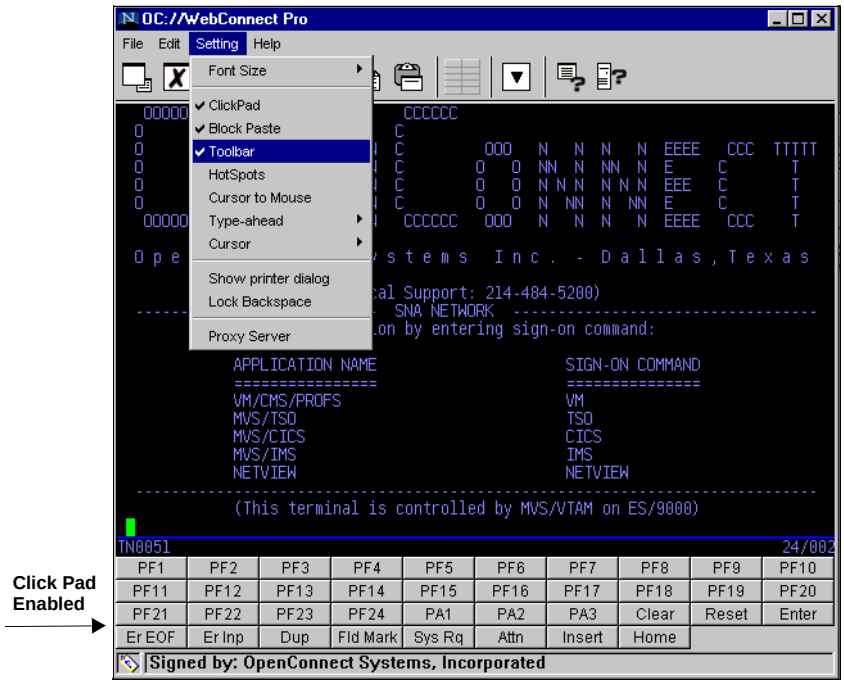

Figure 12: **User Setting Options**

Figure 13: **Enlarged Toolbar View**

Table 2-3: Emulator Toolbar Definitions

Icon	Definition
	**New Session**—Opens a new session emulation screen.
	**Exit Session**—Exits the present session without saving information.
	**Print Screen**—Sends the emulator screen to a print session.

Table 2-3: Emulator Toolbar Definitions (Continued)

	**File Transfer**—Transfers files between a Java client and an SNA host application using standard IND$FILE transfer protocol.
	**Select All**—Highlights the entire screen.
	**Copy**—Copies highlighted areas of the screen to the clipboard.
	**Copy and Append**—Used to copy and append (add) data to the clipboard without destroying the existing data that is already on the clipboard. *Use the Left mouse button to identify (highlight) text you want to copy.*
	**Paste**—Copies data from the clipboard to the highlighted area on the screen.
	**ClickPad**—Turns the ClickPad (PF Keys) at the bottom of the screen on and off.
	**Play Macro**—Displays a list of previously recorded macros and allows you to select one to play.
	**About Client**—Displays detailed information about the client machine, browser, and version of WebConnect Pro Client.
	**About Server**—Displays detailed information about the WebConnect server and current emulation session (version, name, IP address, port, etc.).

Emulation Space

The *Emulation Space* (below the *Menu Bar*) displays detailed messages (or error message) of connections to the *WebConnect Pro* server and the host. If encryption is used, messages regarding encryption key generation also display in the emulation space. After a host connect is established, host data will display in the emulation space according to host data attributes, unless the *Hot Spots* option is active. See *"User HotSpot Configuration," page 68*.

Clickpad

The *Clickpad* is located below the *Emulation Space* if it is enabled. See *Figure 12, page 33*.

Menu Bar Functions

Different menu options can be enabled or disabled by your administrator so that all of the functions described below may not display on your *Menu Bar*.

The following functions, if enabled, will be available in the *3270*, *5250* and *VT* emulation client *Menu Bar.*

Table 2-4: Emulator Menu Bar Functions

Menu	Item	Description
File	**New**	Creates a new instance of the applet and starts a new session, provided the user has not met the maximum number of allowed sessions (as defined by the administrator).
	Print Screen	Prints the emulation screen locally. An image of the current screen prints on your default printer.
	Associated Print Session (3270 only)	Starts a 3287 print session (if this option has been configured for your session by the administrator).
	Macro Rec/Play	Select sub-menu options: Play Macro Record Macro Stop Recording Cancel Recording Delete Macro Save Macro See *"Macro Record/Play," page 41*.
	Save User Settings	Saves the current user settings.
	File Transfer (3270 Only)	Select the link at left for more information.
	Exit	Terminates the mainframe connection and quits the applet. As long as the browser is running, the applet may remain cached and may not need to be downloaded again to start a new session.

Table 2-4: Emulator Menu Bar Functions (Continued)

Menu	Item	Description
Edit	**Copy**	Copies marked text to the clipboard. *Use the Left mouse button to identify (highlight) text you want to copy.*
Edit	**Copy and Append**	This feature is used to copy and append (add) data to the clipboard without destroying the existing data that is already on the clipboard. *Use the Left mouse button to identify (highlight) text you want to copy.*
Edit	**Paste**	Writes (copies) information from the clipboard to the client window starting at the current cursor position.
Edit	**Select All**	Marks the entire screen for copying.
Edit	**Preferences**	*Key Maps*—opens the Key Map Configuration applet. *HotSpots*—Allows the definition of text strings to display as buttons when the strings appear on the screen.(3270 & 5250 only) *Attributes*—Controls the appearance of the emulator screen.
Setting	**Font Size**	Select the desired font size from the list. The display changes to the font size you select. Window Resize—causes the font setting to automatically readjust to match the emulator window size.
Setting	**ClickPad**	Enable this option to display the clickpad. The clickpad allows you to click a button and send an emulation AID key such as Enter, F1, or Clear to the host. The initial setting is configured by your administrator. (see *Table 3-2, page 78 for HTML client information*)
Setting	**Block Paste**	Sets Copy/Paste for Block mode, see *"Copy," page 61*.
Setting	**Toolbar**	Toggle the Toolbar view ON/OFF (if enabled by your Administrator).
Setting	**HotSpots (3270 & 5250)**	Enable this option to display hot spot buttons over text that has been defined as a hot spots. You can then use the mouse to send the AID key associated with that text string to the host. See, *"User HotSpot Configuration," page 68*.
Setting	**Cursor to Mouse (3270 & 5250)**	If this option is enabled, you can move the cursor to a new position by clicking on the position with the mouse.

Table 2-4: Emulator Menu Bar Functions (Continued)

Menu	Item	Description
Setting	**Type-ahead (3270 & 5250)**	Reset—clears the buffers Disable—turns off the Type-ahead attribute Buffers—allow you to continue typing during mainframe response time
	Cursor	**Underscore:** Enable this option to change the cursor from a highlighted block to an underscore.
		Rule lines: select rule lines off/on (see *Figure 33, page 71*).
		Blinking Cursor: Enable this option to make the cursor blink.
	(Silence Bell VT only)	Used to turn off the "bell" sound. If *Silence Bell* is not enabled, a beep will sound when the “bell” character is received in a VT session.
	Show Printer Dialog	*(OC://WebPrint* only) If this option is enabled, a dialog displays when you create a print job, allowing you to change printer settings (choose a printer, select *landscape* or *portrait*, etc.). If this option is not enabled, print jobs are sent to the default printer in portrait layout.
	Lock Backspace (3270 & 5250)	Select (toggle on/off per session) to lock the backspace key to the current field. This eliminates the user accidentally deleting previous fields by using the backspace key. The default key mapping is **CTRL+L**.
	Proxy Server	If instructed to do so by your administrator, select this option and enter a proxy server in the dialog box.
Help	**Key Maps**	Select this option to view a list of key mappings for this session. Default key mappings are defined by the administrator. Select **Refresh** for a list of new key mappings after exiting the applet. Select **Done** to exit the Keymap Help dialog.
	Trace Keys	Enable this option to write keyboard input events to the Java console.
	About Client	Select this option to view more information about the client operating system, applet version, and Java version.
	About Server	Select this option to view more information about the *WebConnect Pro* server and sessions.

3287 Client Emulation Features

The 3287 session user interface is a display window that shows the progress of 3287 print jobs. A few user options can affect the printed output. These options and other user interface features, are explained below.

Menu Bar

The *Menu Bar* allows you to perform the tasks outlined in *Table 2-5, page 39*.

Session Window

The Session Window displays the following information:

- Connection Messages detail attempts to connect to the *OC://WebConnect Pro* server and to the host.
- Security Messages

  When using encryption, messages about the generation of encryption keys are written to the *3287 session window*.
- Print Job Messages report the following information:
  - The status of the print job (started or ended).
  - The number of print jobs completed.
  - The number of pages printed.

The following functions are available in the *3287* emulation client menus:

Table 2-5: 3287 Menu Functions

Menu	Item	Description
File	**Print**	Forces print job to flush to printer (only needed under special circumstances).
	Save User Settings	Saves the current user's settings.
	Exit	Terminates the mainframe connection and quits the applet. As long as the browser is running, the applet may remain cached and may not need to be downloaded again to start a new session.
Setting	**Font Autofit**	(Not available with JavaScript printing.) Instructs the *OC://WebConnect Pro* applet to choose the font size that fits the line of print on the printed paper. This is most useful if the print session is to print jobs requiring different formats. For instance, one job may print out 80 columns and another may print 132 columns. Setting this option would allow the applet to choose a larger font for the 80 column print job.
	Raw Mode	(Not available with JavaScript printing. Only print-to-file support with JDK print in raw mode.) Enable this option to bypass the graphical print API, allowing printer-specific codes to be passed in the data stream and sent directly to the printer.
	Show Printer Dialog	(Available only with *OC://WebPrint*. *JDK* and *JavaScript* print will always show the printer dialog.) If this option is enabled, a dialog displays when a print job is created, allowing you to change printer settings (choose a printer, select *landscape* or *portrait*, etc.) If this option is not enabled, print jobs are sent to the default printer in portrait layout.
	Proxy Server	If instructed to do so by your administrator, select this option and enter a proxy server in the dialog that appears.
Help	**About Client**	Select this option to view more information about the client operating system, applet version, and Java version.
	About Server	Select this option to view more information about the OC://WebConnect Pro server.

3812 Client Emulation Features

The *3812 session* user interface displays a window with the progress of *3812 print jobs*. A few user options can affect the printed output. These options and other user interface features are explained below.

Menu Bar

The *Menu Bar* allows you to perform the tasks outlined in *Table 2-5* .

Session Window

The *Session Window* displays the following information:

- Connection messages; details about attempts to connect to the *WebConnect Pro* server and to the host.
- Security messages; details about the generation of encryption keys (when encryption is used), are written to the 3812 session window.
- Print Job Messages; report the following information:
  - The status of the print job (started or ended)
  - The number of print jobs completed
  - The number of pages printed

> *Note:* See *Table 2-5, page 39* for menu options.

Macro Record/Play

You can record frequently used keystrokes and save them as macros to be activated and played back. Defined macros are either saved locally or to the server, depending on the *Save User Files On* setting option in your *User Preferences* (see *"Storing User Files," page 28*). Select one of the following functions from the emulation session **File> Macro Rec/Play>** menu:

- Play Macro
- Record Macro
- Stop Recording
- Cancel Recording
- Delete Macro
- Save Macro File

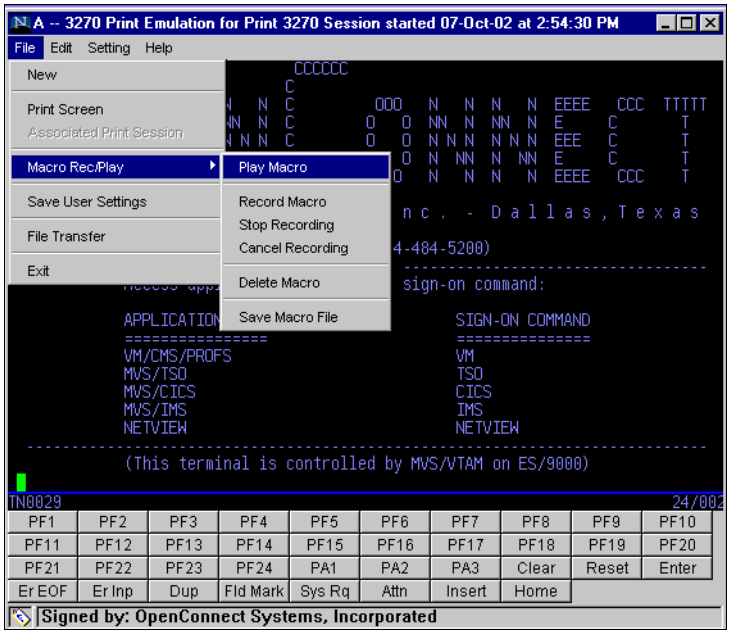

Figure 14: **Record/Play Macro**

Note: In some instances, your system administrator may have set your user preferences to restrict macro recording. If this is the case your menu will only display the "Play Macro" feature as in the following figure. You may also select the play macro toolbar icon, if enabled.

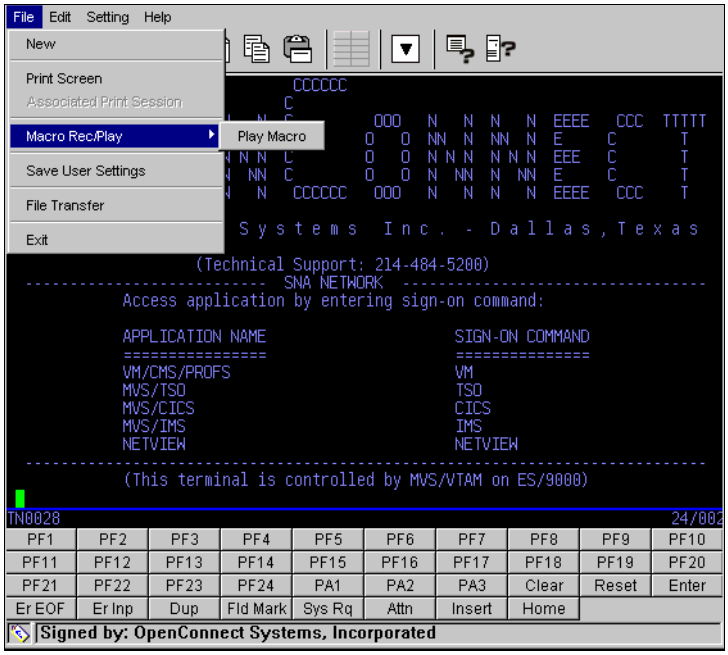

Figure 15: **Play Macro Menu**

Recording a Macro

1. From the emulation session menu, click **File> Macro Rec/Play> Record Macro**.

Figure 16: **Record Macro Name**

2. In the *Macro Name* box, type a name for the new macro (for example, **CICS Logon**).

3. Click **OK**.

4. Type the key sequence (i.e., the commonly used keystrokes) to record the macro.

> *Note:* Do not use the mouse or clickpad while recording. Only keystrokes can be recorded, not mouse actions. For a list of the key mappings, see *"HTML Keyboard Mapping," page 79*, or select Key Maps from the emulation session Help menu.

5. When you have finished recording, click **File> Macro Rec/Play> Stop Recording**.

Figure 17: **Stop Recording Macro**

6. Click **OK**.

> *Note:* You MUST continue to the following instructions and SAVE the macro or it will not be available.

Saving a Macro File

Immediately after recording a macro you will need to save it.

1. Select **File> Macro Rec/Play> Save Macro File**. The macro you recorded will be saved and a confirmation message will display.

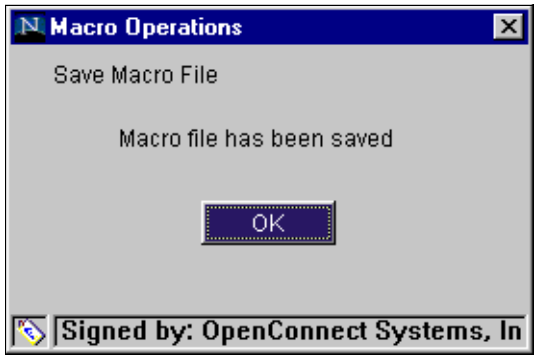

Figure 18: **Save Recorded Macro**

2. Click **OK**.
   - The macro you recorded and saved will be available to replay the next time you start a session.

Playing a Macro

1. Select **File> Macro Rec/Play> Play Macro**. The **Play Macro** window will open.

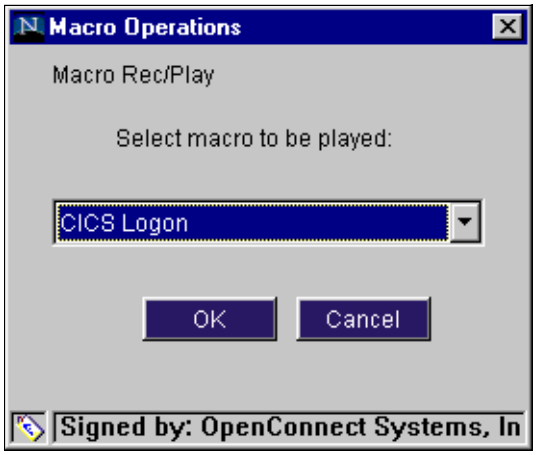

Figure 19: **Play Recorded Macro**

2. Select the name of the macro that you want to play from the drop-down menu list.

3. Click **OK**. The macro keystrokes that you previously recorded will automatically play back, activating the sequence.

> *Note:* For 3270, 5250, and VT sessions you can also play a macro from the Toolbar menu items. See, *Figure 13, page 33*.

Deleting a Macro

1. Select **File> Macro Rec/Play> Delete Macro**. The **Delete Macro** window will display.

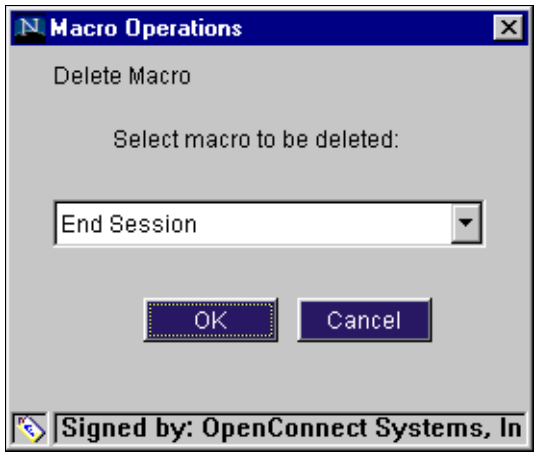

Figure 20: **Delete Macro**

2. Select the macro to be deleted from the drop-down list.
3. Click **OK** to delete the macro. A confirmation message will display.

Figure 21: **Delete Macro Confirmation**

4. Click **OK**.

File Transfer

WebConnect Pro uses the standard *IND$FILE* protocol to transfer files between a *Java* client and an *SNA* host application. This capability can be used to address a variety of networking needs, including centralized data backups and data warehousing through an *SNA* host.

> *Note:* The 3270 File Transfer menu option is only available if it is enabled by your administrator.

Because *SNA* host files use different file formats from *OC://WebConnect Pro* files and *Java* client files, be sure to use the appropriate options for converting files to the receiving host's file format during transfer. Format conversion allows the receiving host applications to use the file without further modification. *SNA* hosts and *SNA* applications used for transferring files are listed below (including the IBM program number and operating system for each application):

Table 2-6: SNA Host/Application Transfer

Application Program	Program Number	Operating System
3270 PC File Transfer for CICS	5798-DQH	VS
3270 PC File Transfer for TSO	5665-311	MVS
3270 PC File Transfer for VM	5664-281	VM

- *WebConnect Pro* supports only the *DFT* (Distributed Function Terminal) file transfer mode.
- You must be familiar with the file transfer application program you use.

Select an option below for file transfer instructions:

- *"Sending and Receiving CICS/VS Files," page 48*
- *"Sending and Receiving TSO Files," page 50*

- *"Sending and Receiving VM Files," page 55*
- *"Multiple File Transfers," page 58*

Sending and Receiving CICS/VS Files

OC://WebConnect Pro allows file transfer between a Java client and the Customer Information Control System/Virtual Storage (CICS/VS) SNA application.

See the following steps to transfer files to and from CICS/VS.

1. Make sure that the *OC://WebConnect Pro* client is connected to the desired SNA host and CICS application.

2. From the **File** menu, select **File Transfer > CICS Send> (or CICS Receive).** The appropriate file transfer window will display.

3. Under *Local File* click **Browse** to search for a file. A file selection window will display.

> *Note:* The procedures for searching for filenames will vary by system.

   - When you select a file the name will display in the text field of the *Local File* box.

UNIX Format

4. To transfer the file in *UNIX* format, click the *UNIX Format* button under *Browse*. *UNIX* format converts line separators to carriage return and line feed pairs during a **Send** operation. During a receive operation, carriage return and line feed pairs are converted to line separators.

   - Do not select the UNIX format when using the binary option or the binary data will be corrupted.

5. Type a host filename in the **Data Set Name** field in the *Host File* box.

> *Note:* The CICS filename can be a program name, a transaction identification, or identification selected by the CICS/VS application programmer. If the filename does not exist, the CICS/VS application will automatically create it. The filename can be one to eight characters long. The character in the first position must be alpha; other characters can be alpha or numeric.

6. Type comments about the file being transferred in the **Comment** field in the **Host File** box. The comments will be automatically included in the first record of the *CICS/VS* host file.

Transfer Options

7. Select a file type from the **Transfer Options** box to configure the way the file contents are treated during the transfer process. The choices are described below:

   - ASCII
     This option instructs the SNA host to translate data between the *EBCDIC* and *ASCII* character formats. Use this option for transferring *ASCII* formatted files, such as text edit files or print files. Do not use the *ASCII* option for transferring binary data (such as output data from a database program) or object code files (such as C compiler object code).
   - Binary
     This option instructs the *SNA* host to perform no character translation. Use this option to transfer encrypted data, compiled programs, and other noncharacter information.

8. Click **Append** if a local file is to be added to the end of an SNA host file or if an SNA host file is to be appended to a local file.

   - If you do not select **Append** in the *Receive* dialog box, the *SNA* host file will replace the Java client file.
   - If you do not select **Append** in the *Send* dialog box, the TCP/IP host file will replace the SNA host file.

9. If the *CRLF* option is desired, check **CRLF**.

> *Note:* If you do not specify the *CRLF* option in send mode, the *SNA* host disregards the local file's line separators.
>
> Do not use the *CRLF* option for transferring binary data (such as output data from a database program) or object code files (such as C compiler object code).
>
> Disabling the *CRLF* option in the *Transfer Options* dialog box instructs the CICS/VS host to copy the file unaltered to the appropriate TCP/IP host. This option can be used to transfer encrypted data, compiled programs, and other data that is unreadable.

10. Click **OK** to begin the file transfer.

11. A *Transfer Status* window will display to confirm the transfer was successfully completed. Click **OK**.

Sending and Receiving TSO Files

OC://WebConnect Pro allows you to transfer files between a *Java* client and the *Time Sharing Option* (TSO) *SNA* application.

See the following steps to transfer files to and from a *TSO* application from a User Session.

1. Make sure that the *WebConnect Pro* client is connected to the desired SNA host and TSO application.

2. From the **File** menu, select **File Transfer > TSO Send> (or TSO Receive).** The appropriate file transfer window will display.

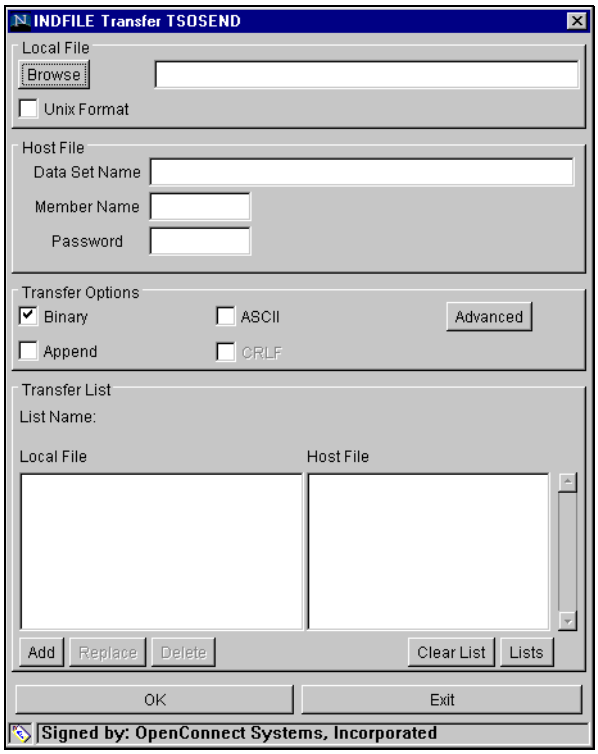

Figure 22: **TSO File Transfer Example**

3. Click **Browse** under *Local File* to search for the peer's file. A file selection window will display. for example, *"Specify File to SEND."* (The procedures for searching for the peer filename may differ by system.)

4. When you select the peer file and click **Open**, the name will display in the text field in the *Local File* box.

5. To transfer the file in *UNIX* format, click the *UNIX Format* button. UNIX format converts line separators to carriage return and line feed pairs during a *Send* operation. During a *receive* operation, carriage return and line feed pairs are converted to line separators.

6. Type a host filename in the *Data Set Name* field.

7. Type a member name in the *Member Name* field.

> *Note:* The TSO host data set name must conform to IBM naming conventions. You can enter an existing data set name (stored in your library) or a new data set name. A closing quote will not display in the *Member Name* field.

- The member name is optional. If entered, the member name should be a member in a partitioned data set directory.

8. *OC://WebConnect Pro* does not create the partitioned data set. When you use the *Send* window to copy a file to a partitioned data set and include a member name, the partitioned data set must exist.

9. The TSO application adds a user ID prefix to the combined data set and member name. To eliminate the user ID prefix, enclose the data set and member name in single (right) quotation marks, for example,'smith.pds2.file1.'

10. If a password is required, type it in the Password field. A password is only required if password-protection has been specified for the TSO data set.

11. Select a file type from the Transfer Options box to configure the way the file contents are treated during the transfer process. The choices are described below:

- ASCII—this option commands the SNA host to translate data between the EBCDIC and ASCII character formats. Use this option for transferring ASCII formatted files, such as text edit files or print files. Do not use the ASCII option for transferring binary data (such as output data from a database program) or object code files (such as C compiler object code).

- Binary—this option instructs the SNA host to perform no character translation. Use this option to transfer encrypted data, compiled programs, and other noncharacter information.

> *Note:* If you select the *UNIX Format* option when using the *Binary* option, the binary data will be corrupted.

Append a File

12. Click **Append** if you plan to add a local file to the end of an *SNA* host file, or you will append an SNA host file to a local file. The *Append* option will override other values specified by the *LRECL* parameter and *RECFM* options in the Advanced section.
    - If you do not select *Append* in the *Receive* dialog box, the *SNA* host file will replace the *Java* client file.
    - If you do not select *Append* in the *Send* dialog box, the *TCP/IP* host file will replace the *SNA* host file. To specify the record format, *LRECL*, *BLKSIZE*, or space, click the *Advanced* button. The *Advanced Options* window displays.

Advanced Options

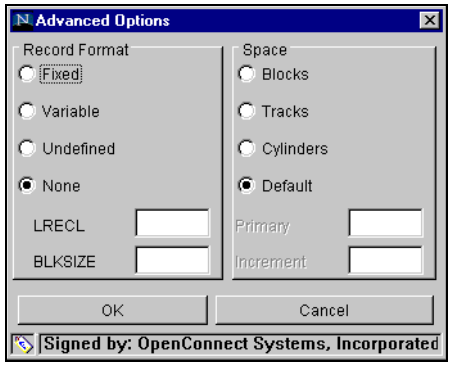

Figure 23: **Advanced Options**

13. In the *Record Format box*, click a radio button for the desired record format. This is only valid when sending a file. The valid values are described below:

- **Fixed—**indicates the data set's records are fixed length.
- **Variable—**indicates the data set's records are variable length.
- **Undefined—**indicates the data set contains undefined record lengths.
- **None—**indicates no record format is to be used.

14. To set the allocated amount of space for a new data set, click **Blocks**, **Tracks**, or **Cylinders** in the **Space box.** When you select Default, TSO uses the **Blocks** parameter default value which is determined by the specifications listed below:
    - **Blocks—**use the smallest storage entity.
    - **Tracks**—use the middle-sized storage entity.
    - **Cylinders**—use the largest storage entity.
    - **Primary**—the primary allocation for the Blocks parameter.
    - **Increment**—the increment allocation for the Blocks parameter.

15. If sending a file, type a size value (such as the data block size of a *TSO* data set) in the **BLKSIZE** field in the *Record Format* area. The variable you type represents a data block's byte count. The default value is **80**.

16. Type a logical record length value of the *SNA* host file in the **LRECL** field in the *Record Format* area. The parameter value represents the number of characters for each record. If the parameter is not entered, the record length is determined by the file transfer operation. For new files, the parameter's default value is *80*.

17. The characteristics of the existing file are used if you are replacing a file or appending information to a file. If you are transferring variable length records, the parameter represents the maximum record size. The parameter's value becomes the longest record sent if you do not send a record of the maximum operating system size; only valid if you are sending a file.

18. Click **OK** to close the *Advanced Options* window.

19. Click **OK** again to begin the file transfer.

20. A *Transfer Status* window will display to confirm the transfer was successfully completed. Click **OK**.

Sending and Receiving VM Files

OC://WebConnect Pro allows file transfer between a *Java* client and the *Virtual Machine/Conversational Monitor System* (VM) *SNA* application.

See the following steps to transfer files to and from a *VM* application.

1. Make sure that the *OC://WebConnect Pro* client is connected to the desired SNA host and VM application.

2. From the **File** menu, select **File Transfer> VM Send> (or VM Receive).** The appropriate file transfer window will display.

3. Click **Browse** under *Local File* to search for the peer's file. A file selection window displays. The procedures for searching for the peer filename vary by system.

4. Select the peer file. The name displays in the text field in the *Local File* box.
   - To transfer the file in *UNIX* format, click the *UNIX f*ormat button. *UNIX* format converts line separators to carriage return and line feed pairs during a *Send* operation. During a *receive* operation, carriage return and line feed pairs are converted to line separators.

5. Type a host filename in the **Data Set Name** field in the *Host File* area. The VM filename can be one to eight characters long.

> *Note:* The VM application automatically creates the receiving host's filename if a filename does not exist.

6. Type the appropriate file type in the *VM File Type* field. This parameter identifies the *VM disk file type*.

7. Type an appropriate value in the *VM File Mode* text box. This parameter identifies the *VM* disk file mode. If you do not enter a file mode parameter, the VM application uses the *A1* default value.

8. Select a file type from the *Transfer Options* box to configure the way the file contents are treated during the transfer process. The choices are described below:

   - **ASCII—**this option instructs the *SNA* host to translate data between the *EBCDIC* and *ASCII* character formats. Use this option for transferring *ASCII* formatted files, such as text edit files or print files. Do not use the *ASCII* option for transferring binary data (such as output data from a database program) or object code files (such as C compiler object code).
   - **Binary—**this option instructs the *SNA* host to perform no character translation. Use this option to transfer encrypted data, compiled programs, and other noncharacter information.

> *Note:* Do not select the *UNIX* Format option when using the *Binary* option or the binary data will be corrupted.

9. Click **Append** if a local file is to be added to the end of an *SNA* host file or if an *SNA* host file is to be appended to a local file.

   - If you do not select **Append** in the *Receive* dialog box, the *SNA* host file replaces the *Java* client file.
   - If you do not select **Append** in the *Send* dialog box, the *TCP/IP* host file replaces the *SNA* host file.
   - To use the *CRLF* option, check **CRLF**.

> *Note:* You can click the *UNIX Format* check box for *ASCII* file transfers. This allows line separators to be converted to carriage return and line feed pairs during a *Send* operation.

   - During a Receive operation, carriage return and line feed pairs are converted to line separators.
   - Disabling the CRLF option in the Transfer Options dialog box instructs the CICS/VS host to copy the file unaltered to the

appropriate TCP/IP host. This option can be used to transfer encrypted data, compiled programs, and other data that is unreadable.

- If you do not activate the Append option in the Receive dialog box, the SNA host file replaces the Java client file. If you do not activate the Append option in the Send dialog box, the TCP/IP host file replaces the SNA host file.

> *Note:* ***Caution:*** Do not use the *ASCII* or *CRLF* options for binary data (such as output data from a data base program) or object code files (such as C compiler object code).

10. To specify the record format, *LRECL*, click the *Advanced* button and the *Advanced Options* window will display.

11. In the *Record Format box*, click a radio button for the desired record format. This is only valid when sending a file. The valid values are described below:
    - **Fixed—**indicates the data set's records are fixed length.
    - **Variable—**indicates the data set's records are variable length.
    - **None—**indicates no record format is to be used.

12. Type a logical record length value of the *SNA* host file in the *LRECL* field in the *Record Format* area. The parameter value represents the number of characters for each record. If the parameter is not entered, the record length is determined by the file transfer operation. For new files, the parameter's default value is **80**.
    - If you are replacing a file or appending information to a file, the characteristics of the existing file will be used. If you are transferring variable length records, the parameter represents the maximum record size. If you do not send a record of the maximum operating system size, the parameter value becomes the longest record sent. This is only valid if you are sending a file.

13. Click **OK** to close the *Advanced Options* window.

14. Click **OK** again to begin the file transfer.

15. A *Transfer Status* window will display to confirm the transfer was successfully completed. Click **OK**.

Multiple File Transfers

OC://WebConnect Pro applet supports *IND$FILE* multiple file transfers. You can create and add files to a multi-file list, then transfer them as a group of files.

- Please refer to *"Sending and Receiving CICS/VS Files," page 48* for basic file transfer procedures and windows.

1. Select **File> File Transfer** from the applet menu.

2. Select the file transfer operation you want to use and click **OK**.

3. To select a local file, click the **Browse** button.

4. Name the file in the **Host File**, **Data Set Name** and click **Add**. The data set name you assigned will display in the host file name list.

    a. To clear the list, click the **Clear List** button.

    b. To define and save the list, click **Lists** (see *Figure 24*).

    c. **Double-click** a name in the **Local File** list to display it in the **Data Set Name** field.

    d. Select a file in the list and click **Delete** to delete it from the list, or replace it with a new file.

    e. Select a file in the list and click **Replace** to replace the transfer with a new transfer.

5. When all the files you want to transfer are in the **Host File** list, click **OK**.

    - A *Transfer Status* window will display to confirm the transfer was successfully completed. Click **OK**.
    - If there is no defined list, a single file transfer will be assumed.

File Transfer Lists

Figure 24: **File Transfer List Name**

1. This feature is designed for saving, deleting, and selecting multi-file transfer lists. The names of lists you have previously saved (if applicable) will display.

2. To add the currently defined list in *Figure 25*, enter a list name and click **Save**.

> *Note:* In this example the list name, "*PrintLocalFiles1,"* displays in *Figure 25*.

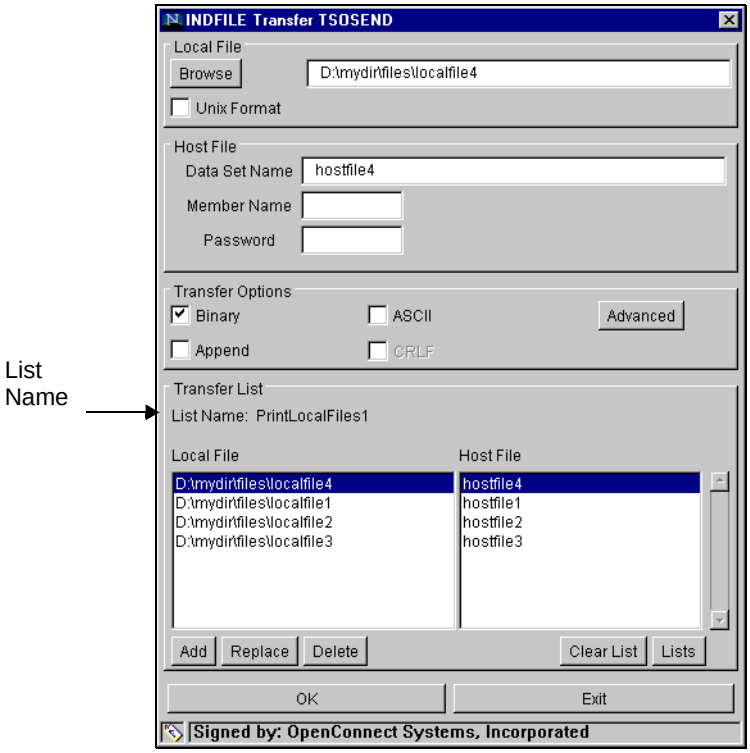

Figure 25: **Transfer List Name**

3. You can name the file transfer list and use it again to transfer files.

4. To delete or use a defined transfer list, select the transfer list and click **Delete** or **Open**, respectively.

Copy and Paste Features

The copy/paste feature can be set for either **block** or **stream** mode by setting the **Block Paste** option under the **Setting** menu. By default, this setting is block mode enabled. If disabled, the data is copied in stream mode.

Copy

See the following steps to copy text to the clipboard.

1. Mark the text by using one of the following copy methods:
   - To mark the entire screen, choose **Select All** from the *Edit* menu.
   - To mark text using a mouse, click and hold the left mouse button at the beginning of text you want to copy. Drag the cursor to highlight the entire text you want to copy.
   - To mark text using the keyboard, position the cursor at the beginning of text you want to mark and then use the key sequences in *Table 2-7* .
2. Select **Copy** from the **Edit** menu or toolbar. The text will be copied to the clipboard.

You can use certain keys to highlight text on the screen, as defined in the following table.

Table 2-7: Keyboard Mapping

Key Sequence	Mapping
Shift + Left	Highlight the text to the left of the current select location.
Shift + Right	Highlight the text to the right of the current select location.
Shift + Up	Highlight the text above the current select location.
Shift + Down	Highlight the text below the current select location.
Shift + Home	Highlight the text to the beginning of the row of the current select location.

Table 2-7: Keyboard Mapping (Continued)

Key Sequence	Mapping
Shift + End	Highlight the text to the end of the row of the current select location.
Shift + Page Up	Highlight the text from the current cursor position to the first row on the screen.
Shift + Page Down	Highlight the text from the current cursor position to the last row on the screen.

- These sequence functions are described below.
  - **Shift + Left:** This marking function uses the shift key and left arrow key combination. If no text is selected, the current cursor position will be selected. Otherwise, the character position to the left of the last selected character position will become the new last character selected in the block. If the last selected character position is the beginning of a row, the last character of the previous row will become the new last character selected.
  - **Shift + Right:** This marking function uses the shift key and right arrow key combination. If no text is selected, the current cursor position will be selected. Otherwise, the character position to the right of the last selected character position will become the new last character selected in the block. If the last selected character position is the end of a row, the first character of the next row will become the new last character selected.
  - **Shift + Up:** This marking function uses the shift key and up arrow key combination. If no text is selected, the current cursor position and all characters up to but not including the character above the current cursor position will be selected. Otherwise, the character position above the last selected character position will become the new last character selected in the block. If the last selected character position is in the first row, the first character on the screen will become the new last character selected. If Shift + Up is followed by a Shift + Down, the new last character selected will be the position that was selected prior to the Shift + Up.
  - **Shift + Down:** This marking function uses the shift key and down arrow key combination. If no text is selected, the current cursor position and all characters up to but not including the character below the current cursor position will be selected.

Otherwise, the character position below the last selected character position will become the new last character selected in the block. If the last selected character position is in the last row, the last character on the screen will become the new last character selected. If Shift + Down is followed by a Shift + Up, the new last character selected will be the position that was selected prior to the Shift + Down.

- **Shift + Home:** This marking function uses the shift key and home key combination. If no text is selected, the current cursor position and all characters up to and including the first character in the row will be selected. Otherwise, all characters from the last selected position to the first character in the row are selected unless it is already selected. If characters are already selected, then those characters are deselected.
- **Shift + End:** This marking function uses the shift key and end key combination. If no text is selected, the current cursor position and all characters up to and including the last character in the row will be selected. Otherwise, all characters from the last selected position to the last character in the row are selected unless it is already selected. If characters are already selected, then those characters are deselected.
- **Shift + Page Up:** This marking function uses the shift key and page up key combination. When used, the current cursor position and all characters up to and including the first character on the screen will be selected. Any characters that were previously selected but are not in this range will be deselected.
- **Shift + Page Down:** This marking function uses the shift key and page down key combination. When used, the current cursor position and all characters up to and including the last character on the screen will be selected. Any characters that were previously selected but are not in this range will be deselected.

Paste

See the following steps to paste text from the clipboard to the screen.

1. Position the cursor where you want to begin copying text.

2. Select **Paste** from the **Edit** menu or toolbar.

> *Note:* You can reposition the cursor by selecting the *Cursor to Mouse* option in the *Setting* menu. Then click the position where you want to move the cursor.

User Configurations

Key Map Configuration

See the following steps to map or remap keys.

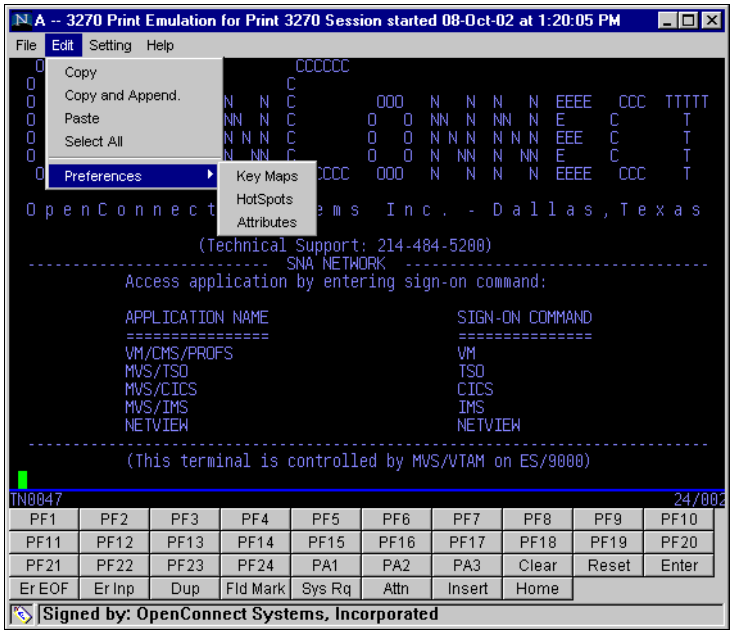

Figure 26: **Edit/Preferences Menu**

1. **Select Edit> Preferences> Key Maps** from the menu.
   - A separate keyboard mapping window will display.

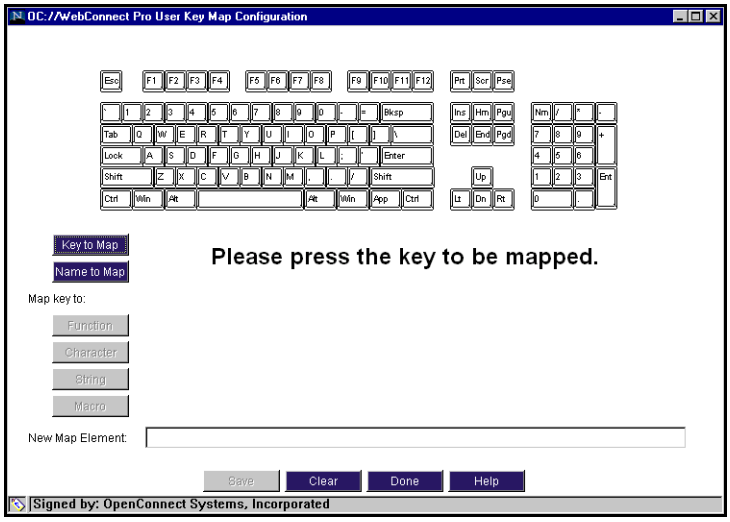

Figure 27: **Keyboard Mapping**

2. Enter the key sequence to be mapped. The last key you press will highlight on the keyboard display, and the key sequence you entered will display in the *New Map Element* text box.

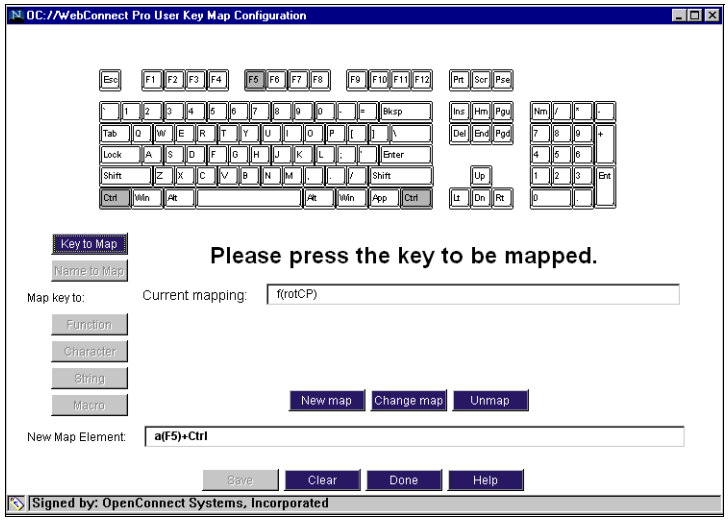

Figure 28: **New Key Map Configuration**

3. Click the *New Map* button.

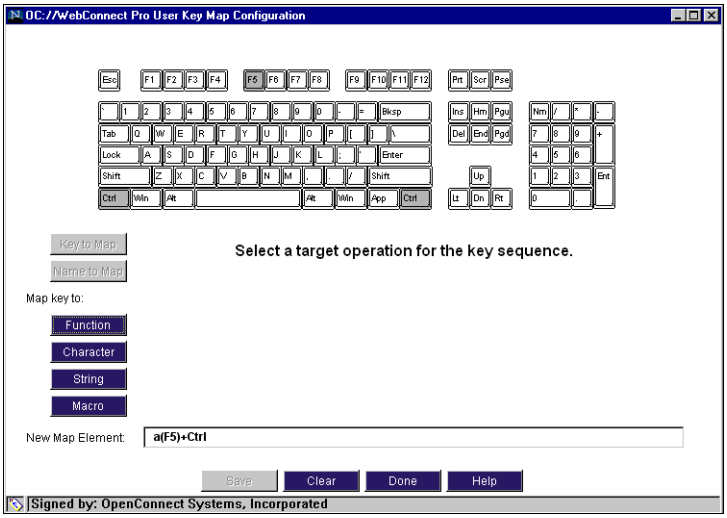

Figure 29: **Map To Function**

4. Choose the target(s) for the key from the buttons on the left column: *Function, Character, String,* or *Macro*.

> *Note:* Key mappings created by your administrator (i.e., through the administration configuration) are available to all users. Key mappings created by individual users through the session applet menu are persistent between sessions but only available to the user who performed the key mapping.

- **Function—**select a function to be performed from the menu and click **Accept**.
- **Character—**enter a character for mapping and click **Accept**.

> *Note:* For *3270* sessions, "Allow placement into numeric fields checkbox," appears. Selecting this checkbox allows this character to be entered in a numeric field. This is the equivalent of holding down the shift key to enter non-numeric characters in a numeric field in a *3270* session.

- **String—**enter a string for mapping and click **Accept**.
- **Macro—**select a macro from the list and click **Accept**.

Any number of functions, characters, and strings can be mapped to a key sequence.

5. When you complete the key sequence mappings, click **Save**.

   Or **Clear** to start over. Repeat the previous steps to map another key sequence.

6. When finished, click **Done** to exit.

User Attribute Configuration

See the following steps to edit your screen attributes and colors.

1. Select **Edit** from the *Menu Bar*.

2. Select **Preferences> Attributes**.

3. The *Attributes* section of the *OC://WebConnect Pro* attribute map screen contains a sample of a screen displaying each attribute supported by the terminal type being configured **(***3270***,** *5250***,** *VT***)**.

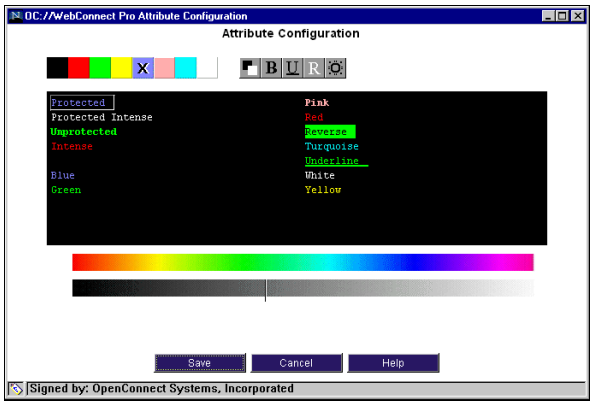

Figure 30: **Attribute Configuration**

4. To change the way a particular attribute displays, select (click) the attribute which will mark the color with an "**X**."

5. The first button on the toolbar will toggle (reverse) the color from the foreground color to the background color. You can select

another color from the color palette and change an attribute by selecting it from the toolbar at the top of the display.

- The *Colors* section of the *OC://WebConnect* attribute map screen contains a sample of the "current color," a "color bar," and a "shading bar."

6. To change the selected color, select the color on the “color bar” and use the “shading bar” to adjust the color to a lighter or darker shade.

7. When you have finished making changes, click **Save**.

User HotSpot Configuration

Hot spot configuration allows you to select and display the definition of text strings, as buttons, when the strings appear on the screen.

See the following steps to set or modify hot spots.

1. Start your client session.

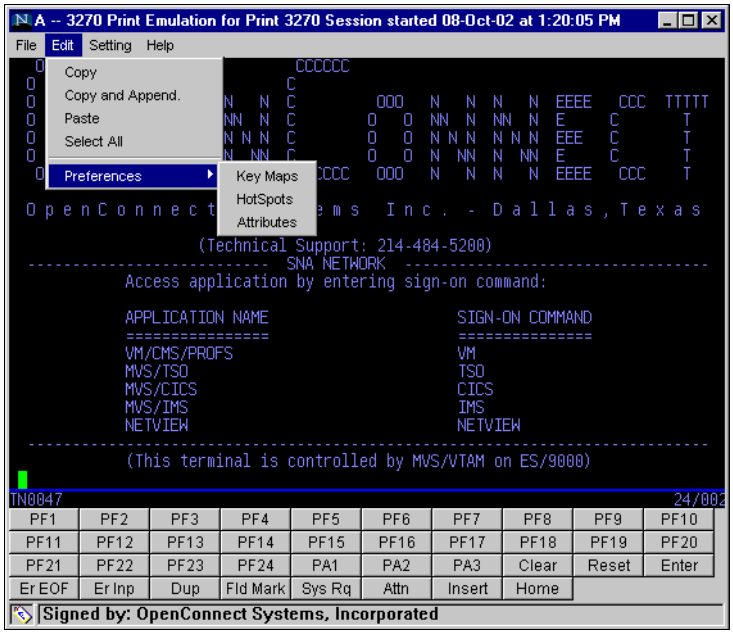

Figure 31: **Edit Session Menu**

2. Select **Edit** from the Menu Bar.

3. Select **Preferences> HotSpots**.

4. The *HotSpot Configuration* screen displays.

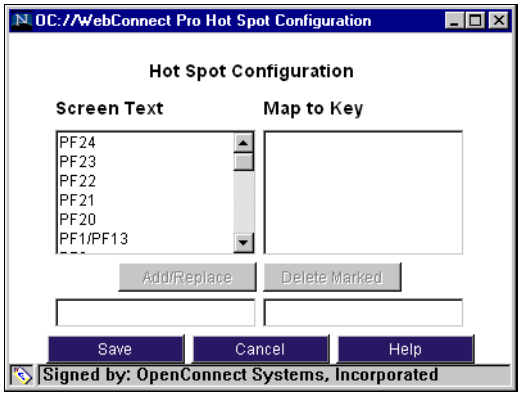

Figure 32: **Configure Hot Spots**

5. In the *Screen Text* column, locate the screen text you want to edit. Click the text so that it displays the text and its *Map to Key* in the edit fields. If the text is new, type the text and the target key in the edit fields.

6. Click **Add/Replace** to update the screen text columns.

7. Repeat the preceding steps for each hot spot change.

8. Click **Save**.

Light Pen Configuration

The *Light Pen* feature is designed to perform on-screen actions with or without using the keyboard. You can use it either of two ways.

1. Use **Shift + Left Mouse Button** (default).
   - Or you can activate the *cursor to mouse* operation from the *Setting Menu*.

2. Select the *Cursor to Mouse* feature (on) and click the right mouse button for the global *Light Pen* functionality.
   - If you click the right mouse button and position the cursor in a light pen field, light pen functionality will be invoked.
   - If you click and drag the cursor within a field, the *default block/highlighted* will be invoked.

Type-ahead Configuration

In a normal *3270* or *5250* sessions, the keyboard locks after you press *Enter* or another *AID* key, and it will remain locked until the next buffer of information is received from the host. Enabling this option allows the next string of host information to enter a buffer without waiting for the next host screen. When the next host screen returns, *OC://WebConnect Pro* sends the saved buffer of information to the host.

1. To enable *Type-ahead*, select the number of buffers to use from the *Type-ahead* submenu (Type-ahead is enabled by default).
2. To disable Type-ahead, select *Disable* from the *Type-ahead* submenu.
3. To reset Type-ahead to the default setting, select *Reset* from the *Type-ahead* submenu.

Cursor Options

A cross-hair cursor makes it easier for you to view full lines of data (vertical or horizontal rule, or both) on any emulation screen. To select this function, see the following steps.

1. To activate the cursor options, select **Setting> Cursor** from the menu. This option is only available to you if your System Administrator has given you permission for this setting in your session profile.

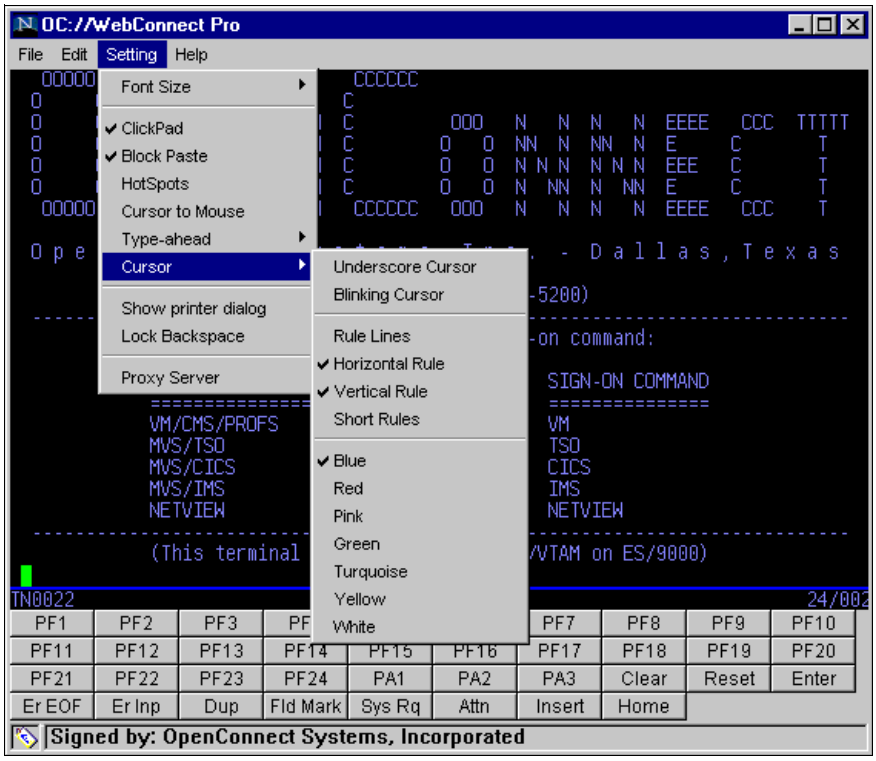

Figure 33: **Setting Cursor Menu**

2. You will find many options with this feature as described below:

   - Rule Lines: select rule lines off/on. Move the cursor up or across the screen to the position you need.
   - Horizontal Rule: select to view the horizontal rule.
   - Vertical Rule: select to view the vertical rule.
   - Short Rules: select to view the short rule or deselect to view the long rule across the entire screen.

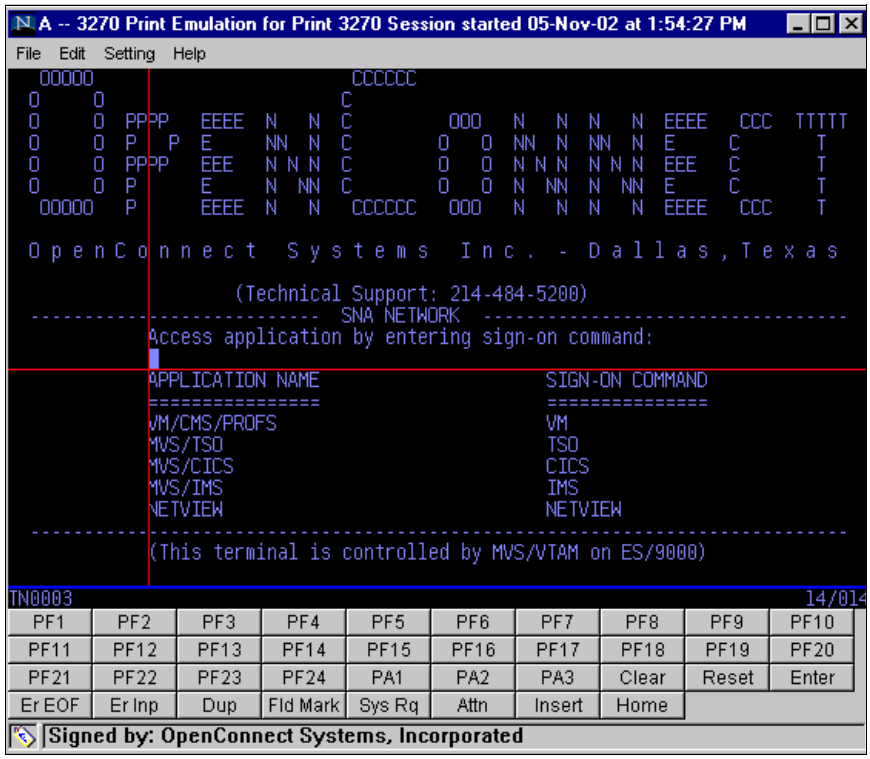

Figure 34: **Cross-hair Cursor**

3. You can set a color for the rule line according to your preference:
   - Blue
   - Red
   - Pink
   - Green
   - Turquoise
   - Yellow
   - White

Chapter 3:

HTML Client Emulation

User Session

From the *Start Sessions* window you can access all pre-configured sessions, user-configurable preferences, settings, and other components described below, only if they are implemented by your System Administrator.

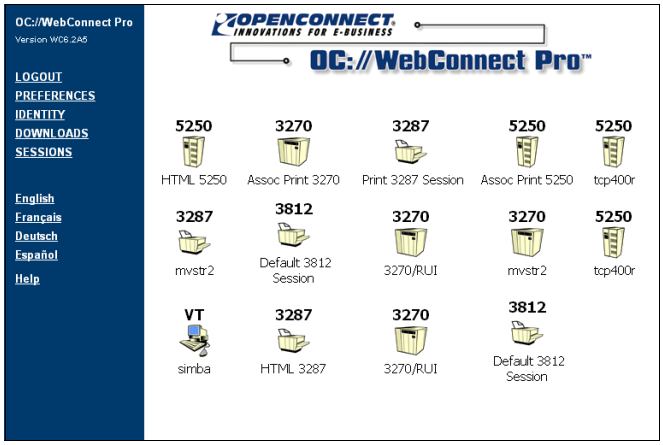

Figure 35: **HTML User Start Session**

- Select a 3270, 5250, or 3287 HTML Client. The session will display a HTML client window as in *Figure 36*, *Figure 37*, and *Figure 38*.

3270 HTML Client

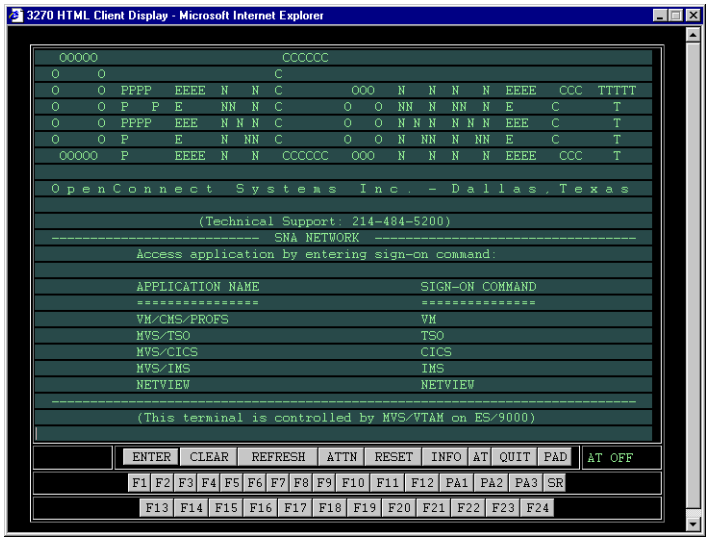

Figure 36: **3270 HTML Client**

HTML client windows have a fixed (always-present) clickpad at the bottom of the window. The "expanded keypad" (rows two, and three) are displayed in these examples.

To expand and use rows two and three, click **PAD** in the first row. (See *Table 3-2, page 78* and *Table 3-3, page 79* for corresponding Key functions).

> *Note:* Depending on your default browser, HTML windows may appear slightly different from these examples.

5250 HTML Client

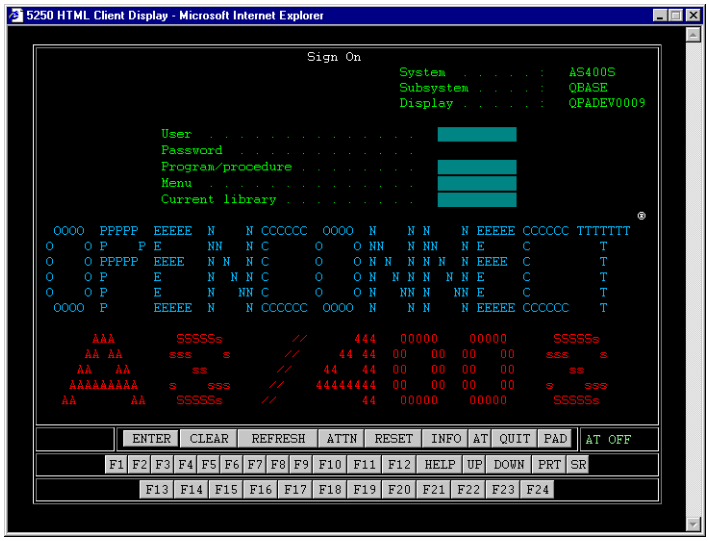

Figure 37: **5250 HTML Client**

> *Note:* The browser will **POST** the current HTML page back to the *WebConnect Pro* server when you use the clickpad. Be sure to complete all data entry **before** using the clickpad to avoid posting incomplete information to the server. See *Table 3-2, page 78* and *Table 3-3, page 79* for key functions.

3287 HTML Client

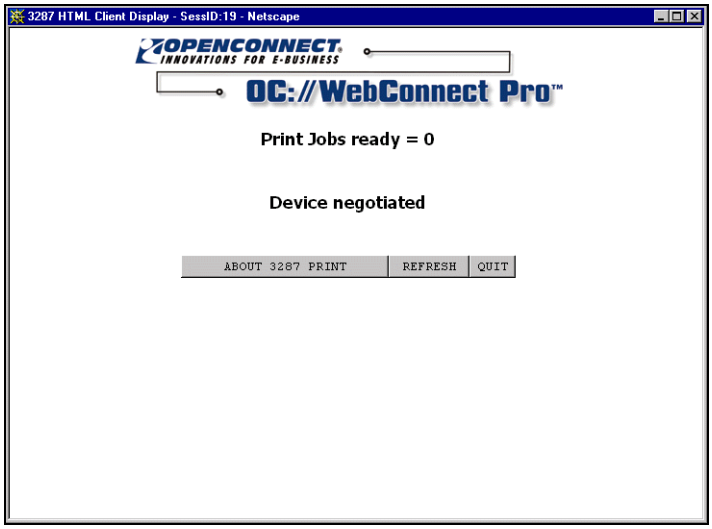

Figure 38: **3287 HTML Print**

- For information about 3287 HTML Print, see *3287 Print to HTML Client, page 23*.

Input Field Validation

WebConnect Pro HTML validates field input data and generates an error message indicator in the Operator Input Area (OIA) if you type incorrect characters.

In this event, the current text field will be highlighted in red to show which character is incorrect, and an error message indicator will display in the lower left hand section of the window, see the following *Table 3-1*.

> ***For example***; if you are typing the number 74006 and accidentally type alpha zeros instead of numeric and press **Enter**, the error message "Num Only" appears and 74oo6 displays in the input field to indicate the wrong keys were typed. The cursor will automatically return to the incorrect field (highlighted in red) and you will not be able to continue until the error is resolved. Therefore, incorrect data type entry will not be accepted or posted.

Table 3-1: OIA Input Field Validation Symbols

Symbol	Description
Num Only=	Numeric only field. Please reenter data.
-Num Only=	Signed Numeric only field. Please reenter data.
No Room=	Signed Numeric only field, no room for minus sign. Please reenter data.
Alpha Only=	Alpha only field. Please reenter data.

3270 Input

3270 requires *alphanumeric* keystrokes, all numbers and alpha characters (upper or lower case) are accepted.

5250 Input

5250 requires *alpha* only or *numeric* only field entries. *Signed* numeric and *Mono* case fields are also supported.

HTML Color Scheme

WebConnect Pro offers a color scheme setting for browser and emulation window changes. This feature addresses the incompatibility with some operating system browsers that do not display HTML sessions clearly because of the background or text color. For example, a session window may be difficult to read if a browser window is black with green text and a HTML emulation session window is black with green text. The administrator can change it to enhance the color scheme, making highlighted fields and text input easier to read.

HTML Clickpad Functions

Table 3-2: HTML Client Clickpad Functions

	Button	Functions
Local*	REFRESH	Refreshes the current HTML page. When using HTML and browser to represent a HOST screen, WebConnect Pro has only one chance to respond to the most recent POST command. However, due to the nature of 3270 and 5250 emulation an entire screen update may arrive in multiple write commands, and the Pro server may not be able to send all the data at one time. This button is used to basically re-paint the most recent screen and pick up any additional screen changes made since the last POST command.
	INFO	Displays clickpad help.
	AT	Auto Tab local feature. If Auto Tab is **ON** while typing in a data field, the cursor will automatically move to the next logical field. If Auto Tab is **OFF**, Auto Tab or Auto Skip is disabled and you must manually move (Tab) to next field.
	QUIT	Quit will terminate the current 3270/5250-session and send a message “Host Connection Terminated." The actual window stays on the screen so that a user can view the WebConnect Pro message.
	PAD	The click-pad toggle button used to display or hide the 2nd and 3rd row of buttons.
Emulation*	ENTER	Submit this form
	CLEAR	Clear
	ATTN	Attention
	RESET	Reset
	SR	System Request
	Help	Help key (5250 only)
	UP	Page up (5250 only)
	DOWN	Page down (5250 only)
	PRT	Host print (5250 only)
	F1-F24	PF1-PF24
	PA1-PA3	PA1-PA3 (3270 only)
*Using **Local** functions will not affect the server. ***Emulation** functions are used to send information to the host.		

HTML Keyboard Mapping

Table 3-3: HTML 3270 & 5250 Keyboard Mapping

Keymap Defaults		
F1 = PF1	SHIFT + F1 = PF13	CTRL + F1 = PA1 (3270 only)
F2 = PF2	SHIFT + F2 = PF14	CTRL + F2 = PA2 (3270 only)
F3 = PF3	SHIFT + F3 = PF15	CTRL + F3 = PA3 (3270 only)
F4 = PF4	SHIFT + F4 = PF16	CTRL + F4 = CLEAR
F5 = PF5	SHIFT + F5 = PF17	CTRL + F5 = RESET
F6 = PF6	SHIFT + F6 = PF18	CTRL + F6 =ATTN
F7 = PF7	SHIFT + F7 = PF19	CTRL + F7 = SYSTEM REQUEST
F8 = PF8	SHIFT + F8 = PF20	Page Up = Page Up (5250 only)
F9 = PF9	SHIFT + F9 = PF21	Page Down = Page Down (5250 only)
F10 = PF10	SHIFT + F10 = PF22	ENTER = SUBMIT
F11 = PF11	SHIFT + F11 = PF23	CTRL+L = Lock Backspace
F12 = PF12	SHIFT + F12 = PF24	

Note: For additional HTML client and Cascading Style Sheet information, contact your system administrator.

Appendix A:

Glossary

Terms and Definitions

3270 emulation

Imitation of an IBM 3270 computer terminal on a terminal connected to a TCP/IP computer so that the imitating system accepts the same data, executes the same computer programs, and achieves the same results as the imitated IBM terminal.

3270 session

The name given to a session when the TCP/IP computer is communicating with the host computer through the SNA3270 Presentation Services or 3270 TELNET Server.

3287 emulation

Imitation of an IBM 3287 printer terminal connected to a TCP/IP computer so that the imitating system accepts the same data, executes the same commands, and achieves the same results as the imitated printer.

3287 session

The name given to a print session when the TCP/IP computer is communicating with the host computer through the SNA3270 Presentation Services or 3270 TELNET Server.

3812 emulation

Imitation of an IBM 3812 computer terminal on a terminal connected to a TCP/IP computer so that the imitating system accepts the same data, executes the same programs, and achieves the same results as the imitated IBM terminal.

3812 session

The name given to a print session when the TCP/IP computer is communicating with the host computer through the SNA3270 Presentation Services.

5250 emulation

Imitation of an IBM 5250 computer terminal on a terminal connected to a TCP/IP computer so that the imitating system accepts the same data, executes the same programs, and achieves the same results as the imitated IBM terminal.

5250 session

The name given to a session when the TCP/IP computer is communicating with the host computer through its Presentation Services.

API (Application Program Interface)

A language and message format used by an application program to communicate with the operating system or other system program such as a database management system (DBMS). APIs are implemented by writing function calls in the program, which provide the linkage to a specific subroutine for execution. Thus, an API implies that some program module or routine is either already in place or must be linked in to perform the tasks requested by the function call.

Applet

A small Java program that can be embedded in an HTML page. Applets differ from full-fledged Java applications in that they are not allowed to access certain resources on the local computer, such as files and serial devices (modems, printers, etc.), and are prohibited from communicating with most other computers across a network. The current rule is that an applet can only make an Internet connection to the computer from which the applet was sent.

ASCII

American Standard Code for Information Interchange. A standard coded character set, consisting of 7-bit coded characters (8 bits including a parity check bit), used for information exchange among most non-IBM data processing systems, data communication systems, and associated equipment. The basic-ASCII character set contains English language characters. Also see EBCDIC on page 86.

Attribute Byte

The byte used to establish the characteristics of the field that follows it, for example, a byte that indicates the following field is blinking, highlighted, or unprotected.

Browser

The program that serves as the front end to the World Wide Web on the Internet. To view a site, type its address (URL) into the browser's Location field. Type www.computerlanguage.com, for example, and the home page of that site is downloaded to your browser. The home page is an index to other pages on that site that you can jump to by clicking a Click here message or an icon. Links on that site may take you to other related sites.

Byte

A sequence of eight adjacent binary digits that are operated upon as a unit and that constitute the smallest addressable unit in the system.

CSS

Short for Cascading Style Sheets, a new feature added to HTML that gives both administrators and users more control over how pages are displayed. With CSS, designers and users can create style sheets that define how different elements, such as headers and links, appear. These style sheets can then be applied to any Web page. The term cascading derives from the fact that multiple style sheets can be applied to the same Web page. CSS was developed by the World Wide Web Consortium (W3C).

Certificate Authority

An organization that issues digital certificates (digital IDs) and makes its public key widely available to its intended audience.

CGI (Common Gateway Interface)

A set of rules that describe how a Web server communicates with another piece of software on the same machine, and how the other piece of software (the “CGI program”) talks to the Web server. Any piece of software can be a CGI program if it handles input and output according to the CGI standard. Usually a CGI program is a small program that takes data from a Web server and does something with it, like putting the content of a form into an e-mail message, or turning the data into a database query. You can often tell that a CGI program is being used by observing CGI-bin in a URL.

CGI-bin

The most common name of a directory on a Web server in which CGI programs are stored. The bin part of CGI-bin is a shorthand version of binary, because executable versions of programs are sometimes called binaries. In real life, most programs found in CGI-bin directories are text files—scripts executed by binaries located elsewhere on the same machine.

Client

In the TCP/IP network environment, a process that employs (or consumes) resources provided by a server. Client is initiated by the user when issuing a networking command. The client process sends a request for service to a server process on the remote host. If the request is honored, a connection is established between the local client and the remote server processes. Also see Server on page 93.

Code page

A table that defines a coded character set by assignment of a character meaning to each code point in the table for a language or a country.

Configurator

The OC://WebConnect Pro automated, menu-driven utility used for customizing configuration files for the OC://WebConnect Pro server.

Configuration

(1) The arrangement of a computer system or network as defined by the nature, number, and the chief characteristics of its functional units. (2) The devices and programs that make up a system, subsystem, or network.

Daemon

A program running all the time on a UNIX system.

Digital Certificate

The digital equivalent to an ID card in the RSA public key encryption system. Also called digital IDs, digital certificates are issued by certification organizations after verifying that a public key belongs to a certain owner. The certification process varies depending on the certification authority (CA) that issues the certificates and the level of certification.

Domain Name

The unique name that identifies an Internet site. Domain Names always have two or more parts separated by a dot. The part on the left is the most specific, and the part on the right is the most general. A given machine can have more than one Domain Name, but a given Domain Name points to only one machine.

E-mail (Electronic Mail)

Messages, usually text, sent from one person to another via computer. E-mail can also be sent automatically to a large number of addresses (mailing list).

EBCDIC

Extended Binary Coded Decimal Interchange Code. A standard mainframe coded character set, consisting of 8-bit coded characters, used for information exchange among most IBM mainframe systems, data communications systems, and associated equipment. Also see ASCII on page 83.

Emulation

The imitation of all or part of one system by another so the imitating system accepts the same data, executes the same programs, and achieves the same results as the imitated computer system.

Extranet

Business-to-business communications. A network that allows an organization's partners and suppliers to interact with corporate information and applications. This communication is typically done via a public or private switched network or virtual private network, VPN.

Firewall

A combination of hardware and software that separates a LAN into two or more parts for security purposes.

FTP (File Transfer Protocol)

A common method of moving files between two Internet sites. FTP is a special way to log in to another Internet site for the purpose of retrieving and/or sending files. Many Internet sites have established publicly accessible repositories of material that can be obtained using FTP by logging in with the account name anonymous; thus these sites are called anonymous FTP servers.

Gateway

(1) A functional unit that connects two computer networks or different network architectures. (2) A special purpose, dedicated computer that attaches to two or more networks and routes packets from one to the other.

Host

Any computer on a network that is a repository for services available to other computers on the network.

Host application subsystem

The program running on the host mainframe to and from which data is sent and received using the emulated station. Any VTAM application which supports 3270 display stations or printers can be accessed through the *OC://WebConnect Pro* server. For 3270 sessions, these host application programs include Customer Information Control System/Virtual Storage (CICS/VS), Information Management System (IMS), Time Sharing Option (TSO), and Virtual Machine/Conversational Monitor System (VM/CMS).

HTML (HyperText Markup Language)

The coding language used to create Hypertext documents for use on the World Wide Web. HTML looks a lot like old-fashioned typesetting code, where you surround a block of text with codes that indicate how it should appear. Additionally, in HTML you can specify that a block of text, or a word, is linked to another file on the Internet. HTML files are meant to be viewed using a World Wide Web Client Program, such as Netscape or Internet Explorer.

HTTP (HyperText Transport Protocol)

The protocol for moving hypertext files across the Internet. Requires an HTTP client program on one end, and an HTTP server program on the other end. HTTP is the most important protocol used in the World Wide Web (WWW).

Hypertext

Generally, any text that contains links to other documents—words or phrases in the document that can be chosen by a reader and cause another document to be retrieved and displayed.

IBM channel

In the IBM System/370 and 370/XA architecture, the processor that does all of the actual input/output (I/O) processing.

Internet (uppercase I)

The collection of independent and autonomous networks linked by gateways that use primarily the TCP/IP protocol suite and function as a single, cooperative virtual network.

internet (lowercase i)

Any connection of two or more networks—as in international or interstate.

Internet address

The 32-bit address assigned to hosts on a TCP/IP internet.

Intranet

A private network inside a company or organization that uses the same kinds of software you find on the public Internet, but that is only for internal use. As the Internet has become more popular many of the tools used on the Internet are being used in private networks, for example, many companies have Web servers that are available only to employees. Note that an Intranet may not actually be an internet—it may simply be a network.

IP Address (Internet Protocol Address)

The physical address of a computer attached to a TCP/IP network. Every client and server station must have a unique IP address. Client workstations have either a permanent address or one that is dynamically assigned for each dial-up session (see Domain Name.). IP addresses are written as four sets of numbers separated by periods; for example, 204.171.64.2.

IP (Internet Protocol)

The TCP/IP standard protocol that defines the basic unit of information passed across the Internet.

IP Routing

Protocol routing that provides a virtual connection from one TCP/IP-based LAN to another TCP/IP-based LAN through an SNA environment.

Java

A network-oriented programming language invented by Sun Microsystems that is specifically designed for writing programs that can be safely downloaded to your computer through the Internet and immediately run without fear of viruses or other harm to your computer or files.

JDK (Java Development Kit)

A software development package from Sun Microsystems that implements the basic set of tools needed to write, test and debug Java applications and applets.

JVM (Java Virtual Machine)

A Java interpreter from the JavaSoft division of Sun. It converts the Java intermediate language (byte code) into machine language one line at a time and then executes it. The Java

Virtual Machine is licensed to software companies that incorporate it into their browsers and server software. Since it is used on all major platforms, Java programs run in most computers. Microsoft also calls its Java interpreter a Java Virtual Machine.

Keyboard Mapping

The process whereby the Terminal Emulator maps the IBM 3270 keys to the keyboard of the particular display station attached to the TCP/IP computer.

LU (Logical Unit)

In SNA, a port through which an end user accesses the SNA network in order to communicate with another end user and through which the end user accesses the functions provided by System Services Control Points (SSCPs).

LU type

Shortened form for LU-LU session type. In SNA, the classification of an LU-LU session in terms of the specific subset of SNA protocols and options supported by the logical units (LUs) for that session. The 3270 terminal emulator supports LUs for display stations (LU type 2) and for printers (LU types 1 and 3). The 3287 printer emulator supports LU types 1 and 3.

Operator Input Area (OIA)

Windows (GUI) text field where users enter numeric or alpha text, i.e., 3270/5250 emulation.

Plug-in

A piece of software that adds features to a larger piece of software. Common examples are plug-ins for the Netscape® browser and Web server. The idea behind plug-ins is that a small piece of software is loaded into memory by the larger

program, adding a new feature. Users need only install the few plug-ins they need, out of a much larger pool of possibilities. Plug-ins are often created by people other than the publishers of the software the plug-in works with.

Port

A place where information enters or leaves a computer, or both. On the Internet, port often refers to a number that is part of a URL, appearing after a colon (:) right after the domain name. Every service on an Internet server listens on a particular port number on that server. Most services have standard port numbers; for example, Web servers normally listen on port 80.

Protocol

A set of procedures or conventions used to formalize data transfer between points.

PU (Physical Unit)

In SNA, the component that manages and monitors the resources (such as attached links and adjacent link stations) of a node, as requested by an SSCP via an SSCP-SSCP session.

Security Certificate

A chunk of information (often stored as a text file) used by the SSL protocol to establish a secure connection. Security Certificates contain information about the certificate owner, the certificate issuer, a unique serial number or other unique identification, valid dates, and an encrypted "fingerprint" that can be used to verify the contents of the certificate. In order for an SSL connection to be created, both sides must have a valid Security Certificate.

Server

In a TCP/IP network environment, a process that provides resources to a network. The server is the remote host process that services the request made by the client. The server is a background process that listens for incoming service requests. When a server receives a request, it establishes a connection with the requesting client, spawns a subprocess, and returns to listening for more incoming requests. Also see Client on page 85.

Session

A logical connection between two stations that allows them to communicate.

SNMP (Simple Network Management Protocol)

A set of standards for communication with devices connected to a TCP/IP network. Examples of these devices include routers, hubs, and switches. A device is said to be “SNMP compatible” if it can be monitored and/or controlled using SNMP messages. SNMP messages are known as PDUs - Protocol Data Units. Devices that are SNMP compatible contain SNMP “agent” software to receive, send, and act on SNMP messages.

SSL (Secure Sockets Layer)

A protocol designed by Netscape Communications to enable encrypted, authenticated communication across the Internet. SSL is used mostly (but not exclusively) in communication between Web browsers and Web servers. URLs that begin with HTTPS indicate that an SSL connection will be used. SSL provides three important features: privacy, authentication, and message Integrity.

TCP/IP
(Transmission Control Protocol/Internet Protocol)

(1) A connection-oriented byte-stream service that is reliable and flow controlled (TCP)and a connectionless datagram service that transparently forwards messages through the gateway (IP). TCP is built on top of IP. TCP/IP protocols are defined by the Department of Defense Advanced Research Projects Agency (DARPA). (2) Synonym for TCP/IP Application Suite. See TCP/IP Application Suite.

TCP/IP Application Suite

A collective term used for referring to DARPA-standard applications commonly distributed with the TCP/IP protocol. Two such applications are File Transfer Protocol (FTP) and Terminal Emulator Protocol (TELNET).

TELNET

(1) Acronym for teletype network. (2) A TCP/IP protocol used for remote login between hosts.

Terminal

A display station, RJE workstation, or printer.

Terminal emulator

The OpenConnect Server's SNA3270 Terminal Emulator provides IBM 3270 Information Display System emulation of IBM 3278 Display Stations, IBM 3278 Color Display Stations, and IBM 3287 Printers. The 5250 TELNET Server terminal emulation emulates IBM 5250 midrange terminal types.

URL (Uniform Resource Locator)

The standard way to give the address of any resource on the Internet that is part of the World Wide Web (WWW).

VT emulation

Imitation of a VT220 computer terminal on a terminal connected to a TCP/IP computer so that the imitating system accepts the same data, executes the same programs, and achieves the same results as the imitated IBM terminal.

VT session

The name given to a session when the TCP/IP computer is communicating with the host computer through its Presentation Services.

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